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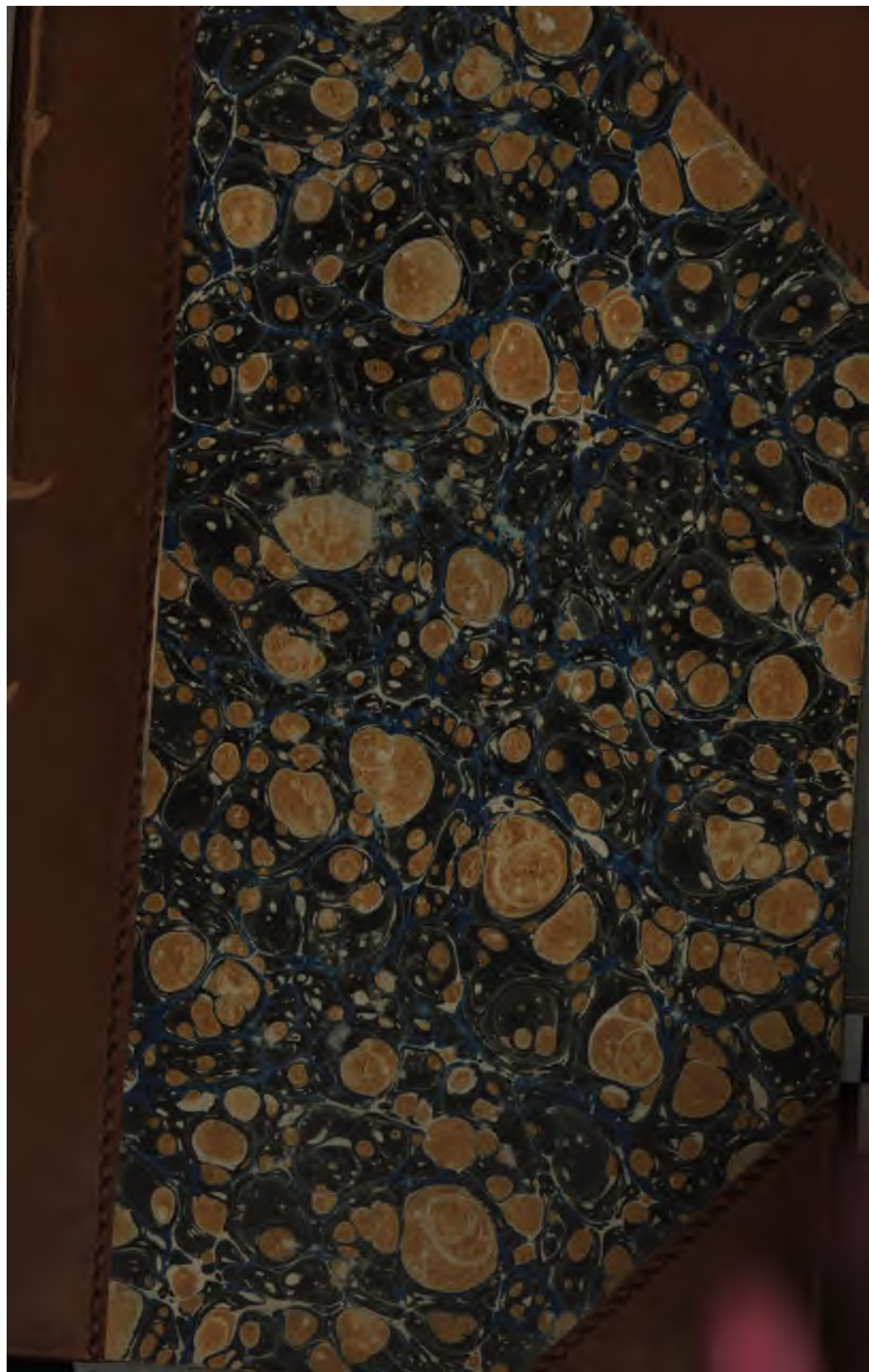
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COMMENTARY,

WITH

PRACTICAL OBSERVATIONS

ON

DISORDERS OF THE HEAD,

IN WHICH IS PARTICULARLY CONSIDERED

THE PROPRIETY

OF BLEEDING.



By GEORGE WARREN, SURGEON.

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ADVERTISEMENT.

THE Author having some months ago in a small work discussed metaphysically the questions relative to the Intellectual Faculties, he has judged it unnecessary to enlarge the present Commentary by entering again upon those inquiries ; but, as some persons may consider the view of the Head herein taken incomplete without such matter, to them he begs to recommend the perusal of that work, entitled “ A Disquisition on the Nature and Properties of Living Animals, with an Inquiry how far our knowledge of Anatomy and Physiology is consistent with the belief of a Soul and a future Life, and on the Intellectual Difference between Man and Brutes.”

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Regent's Park.*

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A COMMENTARY, &c.

CHAPTER I.

INTRODUCTION.

TEACHERS of Medicine, for the purpose of facilitating the study of Disease, have found it expedient to treat of those combinations of symptoms which are usually found together, under separate heads; and this classification, although strictly artificial, and positively unnatural, answers well the end for which it was instituted—viz: to afford detached portions of the phenomena of disease to the mind, for separate contemplation. In the actual existence of Disease, however, the regularity of these artificial arrangements is continually opposed by the conjunction of symptoms which indicate different heads of nosological arrangement, and in which the precepts for cure are diametrically opposite. And in no part of the Science of Medicine are these observations more strictly correct, more evidently true, and

more practically illustrated, than in Disorders of the Head.

Important as is every part and function of the body to the general well-being of the animal, there is yet one part in particular to which those functions are, in their end, more particularly subservient, and in which their ultimate effects are consequently more particularly developed. This part is the Head, the seat not only of the intellectual faculties and the power of volition to the muscular system, but formed very much of the organs of four of the senses, and a common participant in the fifth, or sense of feeling. This glaring fact, or, as it may at first appear, unnecessary truism, deserves to be dwelt upon as involving not only some curious physiological facts, but some of the most important considerations in the treatment of diseases; and not only in those of the head, but also in the supervening symptoms of many other disorders.

And hence it is, that those interruptions of the organic functions, which may, and do often occur in the hands and feet, without exciting any great anxiety in the animal, cannot occur

in the head, without becoming instantly the just cause of well-grounded fears for the loss of animal existence. The temporary separate loss of sight, hearing, smell, and taste, or the sensation of numbness, might be easily borne; but, in a general diminution of the organic operations connected with the head, the exercise of all the senses, hearing, smell, taste, sight, and feeling, together with the acts of volition, become at once suspended; and, preceded by all the feelings of approaching dissolution, a temporary death is actually accomplished to the animal, in the Act of fainting. To obviate, as much as possible, this appalling and dangerous state, to which the peculiar erect form of man exposes him more than any other animal, there appears to be a law in his economy by which the organic functions are aroused to support their operations in the head, even at the expense of the other parts of the body. The same law exists in all animals, but the prone nature of quadrupeds renders it less frequently necessary in them. The existence of this law may be found in an appeal to the leading phenomena connected with the head, both in health and disease, and will be hereafter exemplified by appeal to fact.

In health, by which I rather mean, freedom from disease, than any positive or fixed degree of strength or animal perfection, it will be found a general rule, that where a good tone of fibre prevails with muscular strength, or what to trainers is known under the terms 'good condition,' there prevails but little irritability of head. And such persons are but little affected by ordinary or even extraordinary excitants. While, on the contrary, in persons of a lax fibre with muscular debility, or as the state may be termed, 'out of condition,' there prevails a general tendency to head-ache, and an irritability of head, which is easily affected by causes which, in a better tone of health, would produce no unpleasant effect.—Thus, a pint of wine, with the noise and light of a theatre, produce in the well-conditioned man, none other than a pleasant stimulation; instead of which, in the ill-conditioned, their consequence is nearly always head-ache, and a temporary state of sympathetic fever. Besides these unequal effects, from the same exciting causes, there is found also a disproportionate effect from causes depressing the powers of life.—Thus, in a weak and enervated man or woman, depressing causes, which pass unheeded by the strong

and well-conditioned, induce great prostration of strength, nausea, and fainting. There exists, then, in the weak and ill-conditioned, a state of head in which is combined a great susceptibility of excitement, with a concurrent disposition to depressing causes ; so that it is by no means uncommon, to see in the weak and exhausted, at one hour the head excited to the full and glaring expression of frenzy, and at the next, depressed to the cold, pale, sunken stare of the dead ; now raving in the high excitement of the maniac, and now hushed in the solemn silence of death.

The explanation of the existence of these opposite tendencies in the weak, will be best understood by reverting to the economy by which animals are held in existence. A strong and well-conditioned man or woman, in the plenitude of health, has his life effected by a comparatively slow, steady, and powerful action of the organic functions ; and this slow, steady, and powerful action, may continue for an indefinite time. The whole animal creation, however, are subjected continually to causes by which the powers of organic life may be much lessened ; as, for instance, by a scarcity of, or by un-nutritious food ; by diseases from


which the body becomes exhausted ; by accidental bleeding ; by over-fatigue ; by too great mental anxiety ; by parturition ; by too long continued lactation ; and by many other causes. Now, in the muscular strength of animals, there may, consistent with life, exist an immense variety of degrees, from the imbecility of infancy to the gigantic strength of manhood ; and again, to the almost less than infantile weakness of decaying age. But, amid all the changes of vital power, there cannot, consistent with life, be any great variations in the powers of the senses. A sense, or even two, may be destroyed ; but, as a general rule, the power of the senses must be supported in their natural degree of intensity ; and the reason is obvious—because they constitute the animal's relation with the external world, or its actual life. The force of this position may be rendered somewhat stronger, and perhaps more clear, by a reference to an analogous circumstance in physics. As, for instance, a telescope or microscope may have the actual power of accomplishing the perception of a given distant, or minute, body ; but, if their powers be diminished so far as to fail in their *actual* accomplishment of the perception of those bodies, although consider-

able magnifying power may remain in the one, and retractive power (visual) in the other, yet they become in their *actual* power, as relates to those bodies, absolutely useless. So a physical instrument may be formed to have a power of collecting the reverberations of sounds, but unless its power be sufficient to increase the *actual* perception of sound, it is entirely useless as an acoustic aid. In like manner, the organs of sense, unless they were kept by the organic functions in a state of *actual* power, with reference to the laws of the material world, would be absolutely useless: any power short of that by which they *actually* accomplish their object, with the laws of light, heat, savour, odour, and the natural density of bodies, being as perfectly useless as an *inadequate* power in a microscope or telescope.

To keep up this actual power of the senses, or, in other words, to support the life of the animal, there exists a salutary law affecting the head, to which I have before alluded, and which may be better understood in its operation than by a definition. I shall, therefore, proceed to illustrate it by an appeal to its actual existence.

The extent to which very slow bleeding may be carried, without producing loss of power in the senses, is almost incredible; while a very sudden depletion of even a few ounces, seldom fails to produce a temporary suspension of their power. In a gradual and slow loss of blood, the preservative powers of the animal are regularly exerted in keeping the organs of sense in a state of actual power, and hence this bleeding may be carried to its very ultimatum, producing excessive muscular debility, coldness, and numbness of the extremities, the ex-sanguineous hue, and all the usual phenomena of excessive depletion, without a destruction of the actual power of the senses, or of the organic functions of the head, in the same proportion as other parts of the body. A sudden loss of blood may, however, be made too rapidly to allow the preservative powers of the animal to be exercised; and, in such case, the actual power of the senses is suddenly suspended, and a temporary death, or suspended animation, is the result. But here even, the energies of the body are aroused and a restoration of the sensitive power effected, by a determination of the vital energies to the head. The most striking illustration of this occurs in the flooding woman—a sudden and

large gush of blood occasions an immediate destruction of the powers of sense, and the woman falls into a state of insensibility, coldness, and temporary death ; the organic energies are aroused, and by an unusual determination of the remaining blood, to the head, the senses become restored to their usual power. Another gush occurs, and similar effects follow. These occur until at length her powers of life are almost exhausted, and then a determination is made towards the head, even at the expense of all other parts of the body—the senses being restored, and oftentimes an unusual state of sensibility and excitement, (indicated by an intolerable throbbing, noise in the ears, and visual illusions) while a coldness, numbness, and quick thread-like pulse, pervades the rest of the frame. She dies ; and dissection shews a head loaded with blood, although quarts and quarts had been discharged from the uterus ; thus affording a remarkable instance of that salutary law by which the power of the senses is preserved to the last by cerebral determination. Another illustration of this law may be found in the case of a person gradually starved :—here a well-conditioned and powerful man may be gradually reduced from the fulness of his



strength to the debility of a child; his robust and powerful frame o the bony form of a skeleton; his full features shrunk to the deepest expression of abject misery; and his extremities and whole body reduced from their natural and genial warmth to a cold and chilling shake of the palsied: yet in this amazing alteration his senses retain their actual power to the last, from this preservative law towards the head; and a morbid susceptibility to exciting causes also here prevails. In consumptives, also, under the gradual destruction of the organic life, the actual power of the senses is preserved to the last stages.

In the exhaustion produced upon delicate persons, by a laborious parturition, the head often gets into a state of preternatural excitement, but rarely exhibits any loss of actual power of the senses, until the last stage of life, although the other signs of debility may be manifest enough. Also persons reduced to a state of alarming debility by over lactation, do still preserve the actual power of the senses, and are very liable to all the symptoms of over excitement from slight causes: a very common notion among these patients is, that their case requires bleeding, although they suffer great

muscular debility, palpitation from the slightest causes, coldness of extremities, vertigo, faintness, and great emaciation. In extreme cases from this cause, the powers of life appear incapable of keeping up the actual power of *all* the senses; and, as in the last stage of exhaustion from typhus fever, and some other diseases of debility, there comes on a considerable degree of deafness.

These illustrations, then, comprise a few of the most remarkable instances of that salutary law of determination to the head, by which the actual power of the senses is preserved under the greatest depletion, inanition, and exhaustion which the human frame admits of. By the recovery from these states to a re-establishment of health, may be further exemplified, the same law decreasing in force, as repletion and strength are restored. This increased vascular action and nervous excitement, is not confined solely to the head in cases of exhaustion, but is extended also to the spinal chord; and hence, because dissection has shewn an increased determination of blood to those parts, in some cases which present those symptoms coming under the term nervousness, some Pathologists have concluded nervous disorders

to consist for the most part, in an inflammatory action of the nervous theca of the spinal marrow and brain ; thus confounding a mere concurrent and salutary effect in disease with the actual cause.

But, as this fact alluded to, concerning a flooding woman, is fortunately not of daily occurrence, and is only exemplified in cases where the patient dies actually in a bleeding or flooding state, and is not found in instances of death resulting from the after-weakness produced by excessive hæmorrhage, it may be found difficult to attest, by experience in practice, the fact alluded to. The experiments, however, of Dr. Seed, and those also of Dr. Kellie, in bleeding animals to death, support the fact. But if the reader objects not to drop the fancied force of demonstration in the human race, will admit also the due force of analogy, and has no repugnance in finding a truth out of a lecture-room, he may have a multiplicity of positive illustrations of the fact in animals slaughtered for food. From these established facts, and concurrent observations, may be easily comprehended, how, in the weak and exhausted (which condition, experience teaches, is always accompanied with morbid irritability),

a state of head exists, in which is combined great susceptibility to excitement, and also an accompanying disposition to depressing causes.

Regarding, then, the corporeal structure of man, as an infinitely well-designed whole for his relation with the physical world, the Head may be considered the ultimate aim of his design, in which is accomplished or perfected his material creation ; as (to speak analogically) the ultimate object of a time-keeper is perfected in the dial, or of a planetarium in the representative orrery. The structure and operations of the other parts being essential, but quite subservient, to these ultimate aims—the head in man, the dial in a time-keeper, and the representative orrery in a planetarium. As in the subservient parts of the time-keeper and planetarium, disorder or disarrangement may occur, which will necessarily be indicated or shown in their ultimate effects upon the dial or representative orrery : so also in man, disorder in parts subservient to his head, may, and will be indicated by symptoms in his head, in which it would be no more reasonable to apply remedies there, than it would be rational to harshly remedy the dial or orrery

of a time-keeper or planetarium, when they gave erroneous indications from the errors of their subservient machinery. By these remarks, it is intended to enforce the important practical maxim, that cerebral disturbance is much oftener indicative of some error in the subservient parts of the body, than originally diseased in itself; or to borrow a figure from the poet, "it is more sinned against than sinning." This principle has been freely admitted in reasoning, although much too little accepted in practice; the force of it as a truth in its practical influence, having been frustrated and entirely destroyed by undue and groundless fears concerning the texture of the brain and the operations within the head. So that, although physicians have readily admitted that remote causes have produced the majority of cerebral affections, yet their curative measures have been more directed to obviate the immediate evils which their fearful anticipations have figured as the natural result, than to a reliance upon the removal of the cause; hence bleeding, cupping, leeching, blistering, and continued irritatives, have an almost promiscuous application whenever the head becomes disordered. In extenuation of this practice, may be urged the too often ob-

scurity of the cause while the effects are so glaringly apparent. This removal, however, of effects instead of causes, (more especially in diseases of the head), is so *dreadfully destructive*, that the remedy may be considered infinitely worse than the disease. And, as some of those forebodings, and the consequent rash practice, are so intimately connected with the first principles acquired in the study of medicine; or with some glaring physiological fact, upon which a false induction has been made; or some gratuitous but forcible assumption; these claim a consideration as the fairest, easiest, and most just prelude to their expulsion. One of the earliest notions acquired in the study of disease, is the delicate and complicated structure, and the obscurity of the function, of the brain; its great vascularity, and the vascularity of its membranes, is another circumstance early forced upon the consideration; and the fact of the large share of blood going to the head, naturally accompanies this notion: while the circumstance of sudden death, when occurring from a cause in the head, being nearly always from ruptured blood-vessel there, naturally suggests the propriety of guarding, as much as possible, against too great fulness. Unfortunately, however,

the *means* of guarding against fulness, are either misunderstood (which is mostly the case) or not borne in mind with sufficient steadiness to be of practical benefit.

Now, concerning the structure of the brain, it may be observed that much of its supposed complexity arises from the multiplicity of terms applied to its different parts ; and which application of terms proves, practically in medicine, nothing more nor less than a heavy drag upon the memory, a bewildering ignis-fatuus to the understanding, and a stumbling-block to the judgment. For when men in the treatment of disease consider the brain as not only composed of those portions called cerebrum, cerebellum, medulla oblongata, and their membranes ; but these as again composed of a number of ventricles, hippocampi, centrum ovale, calamus scriptorius, commissures ; corpora-olivaria, pyramidalia, candidantia, quadrigemina ; cornua, crena, crura ; fornix, labiæ, lobes, tubera, thalami, substantia, &c. &c. ; they are apt to forget that these are mere terms applied to *form*, and having no practical bearing upon function, which, for ought that is known, may be uniform throughout all that is medullary, or membranous. Hence it is that the minute anatomy of the brain, by

giving a complicated idea where a more simple one would be better, is apt to mislead in the study of disorder of the head.

Delicacy of structure is another false notion, when applied to the brain, if by delicacy is implied any idea of weakness, or inadequacy to its use. For, although the medullary substance of which it is composed is admittedly softer, and more readily decomposed after death than the structure of bones, cartilage, muscle, or many other parts, yet such softness has no necessary connexion with weakness, inadequacy, or any deficiency of power, in resisting the dangers to which it may be exposed. On the contrary, the brain is quite as equal in strength, adequacy, and power of resistance to its natural dangers, as any other part of the body; and indeed, if experience were (and it ought) to test the strength of parts, the brain would be declared as little liable to lesion as almost any part of the body; although, from the subserviency of other parts to it, it necessarily becomes so frequently the seat of temporary symptomatic disorder.

The physiological fact of a large supply of blood going to the brain, has laid the foun-

dation for other fears to be superadded upon the supposed complexity and delicacy of cerebral structure; this, and the great vascularity of the membranes in the head, has been thought to indicate the necessity of free-bleeding whenever the head became affected. In this conclusion, however, Pathologists appear to have forgotten, that if a great supply of blood be naturally forced into the head, there is also naturally a free provision for its efflux in the large veins returning the blood to the heart. But if the matter be well and fully considered, and the circumstances of arterial blood going against its natural gravity, and the venous return having gravity in its favour, be borne in mind, it will appear that scarcely any (perhaps no) part of the body is so little likely to be, from physical causes, overcharged with blood as the brain. The great vascularity of the brain is, therefore, only a proof of the necessity of a free supply of blood to the proper performance of its functions, and is not a rational basis of well-grounded fears for overcharge of blood, nor for its consequent (*and otherwise irrational*) practice of profuse, hasty, and debilitating bleedings. I have called these bleedings *otherwise irrational*, because if the brain were as complicated and delicate as it is

erroneously supposed to be, and the supply of blood, together with the vascularity of its membranes, were as inordinate as the fearful imaginings of men have pictured, still it would want the sanction of experience, to prove that bleeding was the natural method of relieving that fulness, especially when it is shown upon experiment, that profuse and destructive blood-flowing is invariably productive of a gorged head, as is seen in those who died from flooding, and in those animals who are killed by bleeding; and as is also proved by the experiments of Dr. Seeds. The experiments of Dr. Kellie, of Leith, recorded in the first volume of *Medico-Chirurgical Transactions of Edinbro'* substantiate also this truth, and his reasoning goes further to show, in accordance with an opinion of the second Dr. Monro, that the quantity of fluid within the head cannot be lessened by bleeding, while the globular form of the skull remains entire. And a fund of interesting information will in that paper be found, proving that neither the obliteration of the carotid artery, nor the jugular vein, does alter the quantity of blood circulating in the cranium. This opinion accords perfectly with the known laws of physics; and, if the *cavity* of the cranium be considered a philosophical



vacuum ; and the circumstance of the rest of the system being exposed to atmospheric pressure, be borne in mind ; the uniform fullness of the cranium will be as easily understood as the construction of a barometer, to which it is very analogous : pressure of the atmosphere supporting a column of fluid in both instances.

That much obscurity has always existed upon the nature of cephalic disorders, is what every intelligent, thoughtful, and candid, practitioner will readily admit ; but, that this obscurity in the nature of these diseases has, as it ought to have done, led to a cautious, temperate, and constrained, practice, is, in many instances, decidedly negatived. On the contrary, it would appear, that the indistinctness of the subject had induced men to close their eyes altogether ; and then, by a perversity, worse than blindness, to rush on with a practice which, if authorised by a most cautious deduction of reason, would still demand consideration from its harshness ;—a harshness which would lead to the opinion, that an ignorance of the subject rendered it totally unnecessary to bear in mind any notions of the capacity which bodies have for

suffering. That this notion is not unwarranted, would be well borne out by the fact, that I have seen, and the occurrence is, I fear, too common to be a novelty, a child of a few months old, because it gave some trifling sign of disordered head, purged violently with calomel, scammony, and elaterium; cupped, leeches, blistered on the neck, and head; par-boiled in hot-baths; and irritated severely with mustard-cataplasms to the feet; yet, after all, the child dies: and in every instance which I can call to mind, of this harsh practice, death has ensued; but whether from the severity of the disease, or the severity of the practice, is a point reserved for the consideration of the reflective, and which may be better decided upon in an advanced part of this treatise; or by putting the question, what would have been the result under similar treatment in a healthy child?

That for the most part, persons who die suddenly from a cause within the head, die from ruptured blood-vessel there, is a fact too well proved to be denied; but that this fact establishes any general practical rule to be adopted in the numerous and common disorders to which the head is liable, is not equally

well proved. For a mere determination of blood to the brain, in its greatest degree, as in phrenitis, does not appear to have its termination in death, naturally, by breaking of the blood-vessels; but by effusion, an unnatural secretion. Nor in those temporary determinations to the brain from excessive drinking, do the arteries often give way, except in predisposed persons. In the excessive exertions of race-horses, when they drop down dead, the heart or its arteries oftener break than the texture within the head. Nor do persons who die, having been hanged, although great impediment is made to the return of blood from the head, and great apparent congestion exists, exhibit ruptured vessels within the cranium. Nor in those manifest and painful determinations to the head, so frequent in hysterical, nervous, and debilitated constitutions, does rupture of the vessels occur; although it would appear as if every effort were strained by the circulating powers, to effect some lesion in the brain. In parturition, also, a determination of blood is sometimes made with such violence to the head of the mother, as to occasion what is termed ecchymosis about the eyes, as I have seen in more than one case; yet ruptured blood-

vessel within the head is a very rare occurrence in labour, and what, in sixteen years practice, I have never seen. The circumstance, therefore, of ruptured blood-vessel being for the most part the cause of death in those who die suddenly from lesion within the head, proves not any delicacy or inadequacy in the structure of that part of the vascular system generally, but merely *that rupture of a blood-vessel in the head is almost the only cause occurring in the head, which is capable of producing sudden death*; while the circumstances enumerated of evident determination, not being equal to the breaking of blood-vessels, enforces the suspicion, if not conviction, that when rupture does occur, it must be from some peculiar diseased state of the arteries from which they become weakened.

In treating and commenting hereafter upon the various kinds of disordered head, we shall have frequent occasion to recur to some of these palpable facts, and to enforce their rational bearings upon points of practice.



CHAPTER II.

ON THE CEREBRAL BLOOD-STROKE.

A **STROKE** of the Blood, was formerly a phrase commonly applied to those cases which now are called Apoplexy. The phrase is not so ancient as the term apoplexy, nor was it perhaps ever so general in its application as the latter term. It is, however, manifestly the better nominative of the disease in question, because it circumvects completely the cases to be considered: while the term apoplexy is so extensive in its literal signification, and in its accepted usage so vague, as to have scarcely any practical importance. In accordance with the literal meaning of the term apoplexy, every person who is suddenly struck down may be termed apoplectic, whether from ruptured vessel in the head, in the chest, or in any other part; the term is also applicable to those struck down by lightning; also to those cases where men suddenly fall exhausted and dead from exertion, in sea-scurvy; and, indeed, to all very sudden death, fall-

ings. Usage has, also, long vaguely and improperly applied the term to supervening states having symptoms similar to the sudden blood-stroke, or apoplexy in its strict technical acceptance, but in which the literal meaning of the word is quite set aside :—thus, a person dying from a most gradual morbid growth within the cranium, by which, almost imperceptibly, symptoms of compression come on, is said to die apoplectic, although there is neither suddenness nor striking down. In like manner, persons dying from some poisons, which gradually induce symptoms of compression, are said to die apoplectic, although their state has no connexion whatever with the literal signification of the term. And, indeed, the termination of a great many diseases, presents similar symptoms to those found in persons having a stroke of the blood, to which usage has sanctioned the term *apoplectic*, although quite at variance with its literal meaning. By treating of cases under the terms ‘cerebral blood-stroke’, will be avoided all this vagueness arising from the long-sanctioned misuse of the other term; and the cases circumvented by the present terms will be those only to which the attention is to be directed. These reasons, and not any inclination to a

fanciful innovation, have led me to an adoption of the present phrase.

As a cause of death, the cerebral blood-stroke is by no means an uncommon occurrence; but in comparison with the multiplicity of disorders of the head, it may be considered rare. It does not often occur in the earlier periods of life, rarely before forty. Its near presence is seldom suspected; its approach is silent and disguised; its attack sudden, astounding, and mostly triumphant. Those symptoms which arouse the attention of the sufferer, which raise the solicitude of friends, and which demand relief from their urgency, although they often spread the alarm, and institute precautions against the supposed enemy, are seldom the faithful precursors of the true disease. A silent calm, a treacherous repose, ease even to sensuality, and a seeming security, mask the approach of this destructive disorder. It is thought to be, and perhaps is, becoming more frequent than formerly: the same observation, however, was made concerning its increase, a hundred years ago. This increase, if it be so, speaks but little in favour of our prophylactic treatment; while it may reasonably induce a

some of our measures have rather a tendency to increase its frequency; especially as customs of excess in eating and drinking, the circumstances to which it has usually been ascribed, do not appear to have increased in the last century, if the matter be fairly examined. In one respect, however, custom has, with reference to this disease, changed for the worse: formerly, all who could afford to live high were, by the customs of the day, led into great exercise, by which the evils of repletion are most effectually avoided, and the tone of the vascular system best supported; but this good habit is, in these days, too often neglected, though I believe, very rarely with impunity.


Sometimes, when the blood-stroke occurs, the patient *suddenly* becomes unsensed, falls down, and all voluntary motion of the muscles ceases; the circulation, if at all affected, is rendered only a little slower than natural; while the breathing is laborious, slow, and often stertorous; and all this is attended with a morbid insensibility in the stomach and bowels. Other accidental symptoms are described by writers as the state of the pupil, the heat, and appearance of the face, &c.; but none other symptoms are essen-

tial to the characterising the disease, than these five—loss of sense ; loss of motion ; the circulation not affected or rendered but little slower than natural ; the breathing continuing, although slower, laborious, and often stertorous ; and a morbid insensibility of the stomach and bowels. All these symptoms are essential to a clear manifestation of the blood-stroke, and it is well in practice to attend to the latter, for if the insensibility of the stomach is contra-indicated by efforts at retching, it disproves the existence of compression. As without these five symptoms there is not proof of a blood-stroke, so their presence is quite adequate to establish the fact of compression ; and, if this compression be instantaneous, to warrant the inference of a blood-stroke.

At other times, although the blood-stroke be equally sudden, the symptoms of compression do only *gradually* supervene. In these cases the cerebral lesion, in its immediate effect, presents symptoms not dissimilar to injuries done to the great sympathetic nerve. A sudden severe pain in the head, with momentary confusion and loss of power, indicate the lesion or rupture of the vessel ; upon which follow sickness, paleness, cold-sweating, and a sense of faintness—the

whole constituting what is technically known, as a state of collapse. With re-action or the removal of collapse, symptoms of compression of the brain gradually supervene, but at very indefinite periods; according to Dr. Abercrombie (an excellent authority) from a few minutes to several days. The only disease simulating blood-stroke is hysteria, and there the previous history, or want of suddenness, or some other irregularity in the series of events, will avoid their being confounded.

Blood-stroke having occurred, it may be of two kinds, either from a vessel actually ruptured, or only from some of the vessels being suddenly and preternaturally distended. The peculiar circumstance of the circulation, in the bony cavity of the skull, being in vacuo, renders the effect of any vascular distension there totally different from distension of vessels in any other part of the body. Aneurism, varicose veins, or venous congestion, in other parts, effect a swelling, but without disturbing other functions until very much advanced. But in the cerebral circulation, any distention of vessels must make an equal compression of some other vessels, and consequently prove an interruption to that free circulation which is so essential to the functions of life. It is difficult



to determine of which kind the stroke may be, nor is this of much importance, except with a view to prognosis, in which the physician is more interested than the patient. In the practical treatment, it is of no consequence whether the stroke be from distended or ruptured vessel, the treatment being the same in both. The concurrent symptoms which, to experience, have seemed most to sanction the opinion of ruptured vessel, are those which constitute what has been termed the *sharp* apoplexy or blood-stroke—loss of sense and motion, insensibility of stomach and bowels, stertorous breathing and *contracted pupil*. Combined with the last symptoms the case is nearly hopeless, and many persons of extensive practice assert, that they have never seen a recovery from this combination of symptoms.

From both kinds of blood-stroke, viz., rupture and mere distension, there is a possibility of recovery; several dissections being on record, shewing old coagula, where recovery from the stroke had been made. Of course those from laceration of the vessel, are infinitely more dangerous than those from mere sudden distension, and it may be presumed, that nearly all the cases which do recover, are of the latter kind. Sometimes the blood-stroke becomes

permanent in its effects, holding the patient senseless and motionless until death ; but often, and perhaps more frequently, the senses are recovered to a great degree, and a partial loss of power of movement only remains, (if of one side, called hemiplegia, if transverse the body paraplegia.) For the sake of being distinct, I shall consider the treatment of these states separately.

Where the stroke holds the patient permanently unsensed and powerless, the known and admitted physical cause is pressure, to the removal of which our exertions are to be directed. To effect this is difficult, and often impossible ; yet there are certain measures which reason and experience sanction, and to the full benefit of which the patient is entitled, whether our efforts be crowned with success or not. The first of these measures is bleeding, sanctioned by usage, by experience, and by reason. The extent, however, to which bleeding should be carried, requires considerable judgment, and should be determined upon the two following indications, viz., to relieve the plethora of the system, which bleeding will decidedly accomplish if plethora exist ; and to avoid making cerebral determination by

excessive reduction, which all excessive reduction of blood is certain to do. In the robust, full, and sanguine blood-stricken, therefore, bleeding should be free; in the emaciated, weak, and exsanguineous (and the blood-stroke does sometimes occur in them) it should be avoided; and in all intermediate states the judgment must determine the quantity. In some observations on the undue fears concerning determination of blood to the head previously advanced, it was enforced, that the natural result was seldom or never rupture; and from the great vascular action which is continually seen to go on there, without producing lesion of the vessel, it was enforced, and surely ought to be received as a truth, that some weakness of the blood-vessel must be presumed to exist, when the vessel does suffer inordinate distension or rupture: and after-dissections in those who die, bear out this opinion by the frequent showings of weak and distended vessels, by ossifications, and by the earthy brittleness spoken of by Scarpa. This being the case, and it is totally impossible to comprehend the matter without this admission, it is not difficult to discover, that the blood-stroke is more dependant upon this weakness or disease of the vessels, than upon

plethora, and that sometimes, perhaps often, it is solely dependant upon this weakness, rupture of the vessel being produced by the ordinary action necessary to the operations within the head. A discretion, then, steadily guided by these facts, should be exercised in bleeding for the relief of the blood-stroke.

Much controversy has taken place concerning the advantages and disadvantages of emetics; they are of little use or practical importance, except in cases where the blood-stroke is super-induced by some spirituous or poisonous substances taken into the stomach, in which case, if the cause be suffered to remain, no rational expectation can be held of the removal of the effect. The objection to emetics is in the great determination of blood to the head arising during their operation: their action in the blood-stricken is very uncertain, and from the insensible state of the stomach are required in considerable doses.

To the free and repeated use of active aperients, no objections can be raised; while the advantages of their operation are so numerous in favouring, although they cannot ensure a recovery—by deriving from the head,

by removing any abdominal pressure upon the aorta, by the lessening of vascular fulness, and by an almost specific action in removing a congested state of vessels, that they ought never to be neglected, nor any measures spared to ensure their operation. The morbid insensibility of the stomach and bowels, and the deficient power of voluntary motion so essential to swallowing, are here to be borne in mind; the first of which circumstances may be met by a considerable increase in the doses of the medicines employed; and the latter may be effectually, and only thus effectually, met by the decisive employment of the stomach-pump: an instrument of more practical importance in this disease than useful in the comparatively rare cases of poisoning. Without this, active medicines admittedly so important are written for by the physician, prepared by the apothecary, put into the mouth by the attendant, and sputtered out by the patient. In the perfect compression from blood-stroke, I have personally taken the greatest pains to ensure the swallowing of medicines, but the result has never been satisfactory without the stomach-pump, and I therefore hold it an incumbent and imperative duty to ensure their chance by its immediate usage. In the choice of ape-

rients, practitioners will ever be much guided by the fancied superiority of some over others. I do not imagine it is of much consequence what aperient is used, so that a free and copious secretion from the bowels be accomplished; yet it may be questioned whether the active and long-vaunted properties of hellebore are not rather overlooked in these cases. The active properties of croton oil render it here a desirable medicine,

As powerful and efficient auxiliaries to purgatives, and partaking of their advantages without any objectionable drawback, enemata should be freely used; and here, as in the application of aperients, the insensible state of the bowels is to be borne in mind, and an adequate increase of strength to be made in using them. Large, strong, and frequent ablutions of soft soap and water may for this purpose be used, or aloetic solutions by those who prefer them; and, in order to ensure a sufficient injection and to extend its influence upon the bowels, a forcing-pump should here be used.

Cupping and leeching may be viewed in the light of useful auxiliaries to, and sometimes as

substitutes for, general bleeding, and should be employed with the same reference to a reduction of plethora, or withheld with the same knowledge of their baneful effect in excess, as general blood-letting.

It is difficult to estimate with any degree of precision the importance of blistering, custom having sanctioned its usage so universally in these cases, that a relative estimate cannot be formed upon experience: comparatively with bleeding and purging, however, it is of only secondary consideration. The best place for blistering is the nape of the neck. Perhaps I do not sufficiently value these applications in the present disease, and it may arise from the circumstance of one or two of the most remarkable recoveries I have seen from blood-stroke, being effected without the aid of blisters, and where they were only omitted upon the positive interdict of the nearest relatives.

Lukewarm and stimulating baths to the feet and legs are rational, may be important, and perhaps now and then have been useful.

All other measures relative to the blood-

stroke have an equal reference to those cases where the patient is not held permanently unsensed, and will therefore be taken into consideration after some remarks upon the paralytic state. It often, and perhaps most frequently, happens, that the blood-stroke does not hold the patient permanently *unsensed* and *totally* void of voluntary movement, but after a short time (and sometimes the period is so short as not to afford to the friends an opportunity of observing the completeness of the stroke) the blood-stricken is left only deprived of the voluntary movement of a part of the body (paralytic) mostly of one side. Here the practical measures are the same as in the permanent blood-stroke, but their application is to be modified by several considerations. The question of bleeding is first in importance. In the permanent blood-stroke, there remains a compression, which, if not removed, must be destructive to life; in the paralysis from blood-stroke, there remains a consequence of pressure, and the cause may be presumed to exist in some degree. Whenever the local paralysis is established, it is never suddenly removed by an immediate bleeding; this experience has established: the indication for bleeding, therefore, is not the sudden and

instantaneous removal of paralysis. A slight stroke producing paralysis, establishes, however, the unquestionable fact of a tendency to the disease, and it frequently happens, and probably would oftener but for the exertions of our art, that a repetition of the stroke is made, and permanent blood-stroke supervenes upon the lighter form of paralysis, from which the danger of the patient is incalculably increased. It is, therefore, in reference to the prevention of the recurrence of the stroke, that the judgment is to be exercised in determining the propriety and extent of bleeding. The previous stroke and antecedent circumstances to the stroke, with the recollection of the use of bleeding in Plethora, and its evils in giving rise to cerebral determination when it produces any excess of reduction, are the influencing points for consideration.

The previous states enforcing the propriety of bleeding are these—the patient having lately increased in flesh—having omitted some customary exercises—having failed in some customary discharge—having suddenly experienced a change from the troubles and annoyances of life to ease and the means of its pleasures.—Combinations of these states—and any other peculiarities

which may plainly and palpably bear out the opinion of a full state of the sanguiferous system.

The previous states which contra-indicate bleeding are—recent loss of flesh, and relaxed muscular fibre—previous inordinate and continued exercise—inordinate discharges—previous long-continued mental anxiety.—Combinations of these states—and any peculiarities which plainly and palpably bear out the opinion of previous inordinate reduction.

The immediate exciting cause of the blood-stroke is seldom apparent, but when the knowledge is obtained that it arose from some sudden burst of passion in the debilitated and irritable (a state coming under the terms ‘out of condition’), bleeding is contra-indicated, because in this instance the weakness of the vascular system is more the fault than fulness of blood; which weakness of the vascular system will not be lessened by bleeding, although the taking away of blood will, to a certainty, increase the determination to the head.

The active and repeated action of aperients are here as requisite and as rationally enforced,

as full of advantage and as void of mischief, as in the permanent blood-stroke. Their effect, however, may, from the sensibility not being so much diminished in the present instance, be ensured by smaller doses than in the permanent stroke ; and, from the voluntary action of swallowing remaining but little impaired, the stomach-pump may be dispensed with ; and, indeed, from the greater degree of sensibility and consciousness which exists here, its application is inadmissible, and repugnant to the patient, the friends, and to that humanity and discretion which should prevail over the exercise of our art.

From the more sensible state of the alimentary canal, the use of enemata is not so frequently required in these cases, but where further aid to the ordinary action of aperients is required, they may be freely and frequently administered. Local bleedings, blistering, luke-warm and stimulating baths to the feet and legs, and stimulating cataplasms are here as appropriate as in the permanent stroke.

After this slighter form of blood-stroke, there sometimes occurs a state in which it would appear that the brain had suffered some inter-

ruption or destruction of its function, both in its organic and intellectual subserviency ; in which state the patient falls, or rather gradually wanes, into a low delirium with ill-directed efforts towards muscular exertion ; these show themselves in a throwing about of the arms, and in attempts to get out of bed. The tongue becomes brown, dry, and ultimately black ; the teeth loaded with fœtid sordes, and the secretion from the bowels putrefactive ; a state, in effect, and perhaps in fact, corresponding exactly with that usually coming under the term Typhus. This state would perhaps as often supervene upon the permanent and sharp blood-stroke, as upon the lighter form which leaves the patient paralytic, but the fatality of the former is generally too soon proved to allow this new train of symptoms to be developed. Fortunately, this state of the brain is much within the salutary influence of medicine ; and it may not be deemed an unfortunate circumstance, that there is only one medicine upon whose remedial powers any reliance can be placed ; and to ensure whose influence, therefore, every effort is to be directed : this medicine is mercury, and incomparably the best preparation is calomel : its use must be guided entirely with reference to its effect,



and without any regard to the usual doses and intervals observed in its ordinary application. In a confident reliance upon its sole remedial power, and in the conviction of its effect being the only object to be considered, I have employed it in these cases, most happily, to an extent which might excite astonishment in any one ignorant of its benefit where its influence is accomplished, and yet not aware of the extraordinary insensibility of the body to its action in this peculiar state of the brain. This state of the brain existing, the pathognomic signs of which are very dry, brown, or black tongue with delirium, I give as much calomel as I can get the bowels to retain (aided, sometimes, by opium), until a moist spot or line is evident upon the side of the tongue; instantly the active repetition of calomel is suspended, and only occasionally used, when the clearing of the tongue does not go on steadily and sufficiently: the intellectual subserviency of the brain is invariably improved with the improvement of this co-existent appearance of the tongue.

The dietetic treatment of the blood-stricken should be simple, and regulated with reference to two considerations, viz.—to avoid plethora

by undue repletion ;—and to avoid that state of head and morbid disposition to cerebral determination, which an undue restraint from food so invariably produces. The mild, simple, and yet sufficiently nutritious forms of gruel, panada, milk and water, barley-water, arrow-root, &c., seem, therefore, the regimen best suited to the earlier periods of the blood-stroke. Some practitioners think a fluid diet favourable to the formation of a plethoric state, but this objection, if ordinarily well-founded, cannot hold while the bowels are kept freely moving.

The period immediate in succession to the blood-stroke being passed, and the patient having the good fortune to be saved from its destructive effect, although probably remaining paralytic, or somewhat impaired in mental or animal powers, the object next for consideration is, how best to restore the use of the impaired functions, if any exist ; and, at the same time, to prevent a recurrence of the stroke. The most important questions in the accomplishment of these objects are, the subjects of diet, and exercise, and air. By a judicious combination of diet, and exercise, and air, the weak, emaciated, trembling, and pusillanimous hypochondriac may be rendered strong, plump, steady, and courageous. By the

judicious combination of diet, exercise, and air, the bloated, yellow, indolent, short-breathed, and pampered sensualist, may be made a firm, clear, animated, well-breathed, and energetic man. And by these means, the atonic and hæmorrhagic become braced, and retain their blood. By these means, the muscular, nervous, cuticular, pulmonary, alimentary, and vascular systems are best, and by these means only *safely*, strengthened.

The natural and uniform effect of pure air is, to stimulate and rouse into action the whole nervous and sanguiferous systems; while, at the same time, it imparts a tone and energy to the muscular and alimentary systems, which give a renovation to the whole frame. These effects, to the long-confined townsman, are sensibly felt in a mere daily excursion to the purer air of the country; and are happily often permanently known to the re-established convalescent.

The natural and uniform consequence of *judicious* exercise, is also to stimulate and rouse into action the whole nervous and sanguiferous systems; while, at the same time, it imparts a tone and energy to the muscular

and alimentary system, which constitutes and preserves the vigorous health of the body.

The natural effects of diet, or the uses of food-taking, are to support muscular strength, and to keep up the sensibility of the body : and the appetite is naturally the index to the required supply. But in the patient recovering from blood-stroke, such an unnatural state exists as requires the control of reason, instead of the guidance of inclination, in regard to diet as well as in exercise and air. The weakened state of the patient's powers naturally incapacitate him for much exertion, and the greater efforts required to effect a moderate exercise, together with the imbecility or indecision of mind which so uniformly remains for some time after a blood-stroke, renders the enforcement of regular, frequent, and judicious exercise, with a correspondent regularity and discretion in diet, points of first importance in our curative measures. For a person convalescent from blood-stroke soon acquires his usual appetite, which if before adequate to his wants, and probably it was more than adequate, must now be quite disproportioned, and if indulged fully, must be a just ground for the expectation of plethora. On the other

hand, if the patient be kept constantly reducing, by the supply of food being inadequate to the wants of the body, a morbid irritability and tendency to cerebral determination will invariably result. To steer between these two dangerous and often fatal extremes, then, constitutes what may be termed the *judicious* management of diet; this must, however, always be influenced, in some degree, by the quantum of exercise. It would be impossible to establish, upon any reasonable grounds, the definite quantities of food best suited to these states; the principles, however, upon which this important point should be regulated, may be brought to great simplicity, and reduced to these few plain maxims.—The quality of the diet should be simple.—A full meal should never be made.—The quantity of aliment should never be so scanty as to occasion the quick and irritable pulse of exhaustion.—Increased exercise is warrantry for increase of food: and every occasional cessation from usual exercise should invariably be accompanied by a correspondent reduction of diet. To obviate fulness of the bowels, and all abdominal irritation, the frequent and almost constant source of cerebral disturbance, a mild, warm, and effectual purge, should be used

every fourth day for months. Mercurial, saline, and most other purges, produce a temporary reduction, and inconveniences which render their long-continued usage obnoxious to the patient, and an actual inconvenience in reality. But the following medicine is free from these objections, and appears particularly well calculated for these cases. It should be taken early in the morning, the patient keeping his room an hour or two later than usual, as it generally has some effect upon the skin or kidneys as well as upon the bowels.

R—Ext. Aloes spicat. ʒss.

Cort. Aurant. ʒiss.

Bals. Peruvian. ʒj.

Vini alb. (Madeira) Oj. Misce s. a.

digere per dies quatuordecim et cola.

Dosis ʒi. ad ʒij.

The dose will require to be varied in different individuals, and it should be so proportioned as to produce one or two free evacuations of the *contents* of the bowels, and yet not carried to such an extent as to make any exhausting demand upon the system. Should this medicine, from peculiarity of constitution, disagree, the Decoct. Aloes comp. or some similar pre-

paration may be substituted, keeping the same intention in view, viz.—to preserve a free discharge of the contents of the bowels, without making an exhausting demand upon the system. Reliance being steadfastly placed upon these measures as the *basis* of cure, recourse may be had to the auxiliary aid of local stimuli, such as embrocations, the douche-bath, electricity, and galvanism; but the internal and general use of powerful stimuli in paralysis from blood-stroke, is always a dangerous practice, and much to be reprobated. In the paralysis produced from paint, or other poisons, and in that which is sometimes in young people the result of long-continued abdominal disorder, they may be admissible; but reason, experience, and every principle which ought to guide our measures, forbid them in the blood-stroke. A cautious plan of diet, regulated by the preceding maxims, will render unnecessary, those frequent, local, and often general bleedings, which are so constantly had recourse to after a blood-stroke, as a preventive mean against recurrence; but which oftener prove, if effect constitutes proof, a cause of the very disease they were intended to prevent: it rarely happening that the person who gets a taste for bleeding in the

fear of disordered head, does not in the sequel ensure to himself that very disease which he had endeavoured to avoid. It is, indeed, a most unreasonable supposition, to imagine that vessels already too weak will be remedied by repeated and enervating bleedings; and, if to obviate plethora be the only object for which extraction of blood is made, why is not that object accomplished by the more simple, rational, and natural method of reduction by diet?

A steady and firm reliance upon the adequacy of diet and exercise to the avoidance of plethora, ought to operate the exclusion of those timorous anticipations which so often lead to the rash abuse of the lancet; nor should any of those ephemeral and flitting symptoms, which so repeatedly occur when the head has once become disordered, such as flushing, noise in the ears, cloudiness of sight, vertigo, twinkling about the eye-lids, starting in sleep, &c., &c., be allowed to weaken the confidence due to a well-regulated system of diet and exercise; the more especially as all those symptoms are, demonstrably in many instances, the consequence of bleeding and other measures of reduction, and, therefore, by no means positive and imperative demands for its repetition.

In the earlier period, however, after the blood-stroke, where considerable reduction had been made, and measures of diet and medicine taken for the prevention of plethora, I have, in fat persons, found the blood-vessel system becoming too full, and giving premonitory symptoms of a recurring stroke. In the instances in which I have observed this, the supply has evidently been from a rapid absorption of fat, evidenced by the palpable wasting of the patient, conjoined with the symptoms of plethora and lethargy. In the latter stages of convalescence, this rarely, perhaps never, occurs.

The immediate destructive effect of the blood-stroke having been warded off by timely and well-judged aid, its recurrence prevented by a judicious regulation of diet and exercise, and the impaired animal and mental functions restored to their pristine vigour by time and salutary measures, the patient should cherish habits of temperance and exercise as his best, surest, and most lasting friends; friends by whose aid he can best and well defy his treacherous enemy.

CHAPTER III.

ON CEREBRAL EFFUSION,


THERE are few subjects in Medicine which appear to have involved greater difficulties, or which have proved the basis of more contradictory opinions, than Effusions in the head, the cerebral affections now to be treated of. The multiplicity of symptoms necessarily connected with disorder of a part having so extensive an importance in voluntary, involuntary, and organic movements;—in the manifestations upon the countenance;—in all the senses;—and so intimately connected with the stomach and whole alimentary canal;—and indeed, with all the organic functions, must render complicated and variable, and difficult to bring into narrow compass and definite terms, the specific character of some of its diseases. And more particularly is this experienced in the present instance, where a variety of disorders having a common result come to be embraced in the terms expressive of that result merely, without any reference to the

causes, progress, mode, or order of the disease. Hence it is that in hydro-cephalus almost every symptom of almost every disorder may be enumerated as an indication or accompaniment of this malady ; and page after page might be filled with symptoms of this disease, to the amazement and alarm of the ignorant, and with but little practical instruction to the better learned. Much of this obscurity and difficulty has arisen from the impropriety of considering a specified morbid appearance a necessary result of identical disorder, and thus making an ultimate effect or sequel the basis of a knowledge of disease : and which effect, in this instance, is so irregular in its occurrence, as to allow the enlistment of an almost endless series of symptoms to be enumerated as its supposed natural precursors ; while there is not one specific diagnostic symptom of its actual and positive existence. That these disorders may be more easily understood, their causes more clearly comprehended, and the precepts for their cure more simple, definitive, and more practically useful, I shall, instead of considering them under the mere head of a solitary effect, treat of them under the more natural and various forms of their occurrence ; in which, as in all other instances, I shall avail

myself of the observations and experience of previous writers; but, in the first instance, more particularly of the experience and observations of Dr. Golis, a physician at Vienna, whose excellent Treatise on Water in the Head, has been translated by Dr. Gooch.

Section I.—On the Water-stroke.


Dr. Golis observes, and he has the concurrent opinion of, I believe, all practical men, that “there is a *sudden* effusion of fluid within the brain, either occurring idiopathically, or the consequence of the repelled matter of a previous disease (defect of crisis), or the consequence of obstructed evacuation from an excreting organ, from which death occurs in a few hours. To this belong all those depositions on the brain which arise from small-pox, measles, erysipelas, and other febrile eruptions; also those convulsions which follow the sudden cessation of chronic, or habitual discharges, the repulsion of chronic eruptions, as crusta lactea, tinea, discharges from the ears, and the like; or from diarrhœa, dysentery, general perspiration, when the same has been suddenly stopped, without previous perceptible turgesc-



tence or inflammation. In all these cases of sudden death, there is found, on examining the bodies, an effusion of fluid in the head, for the most part in the ventricles of the brain itself." p. 6.—This disease he nominates, and with great propriety, the *Water-stroke*, thus marking the peculiarity of its suddenness, and, at the same time, distinguishing it from other species of water in the brain, and avoiding that confusion which prevails so much in other writers upon the term *Hydro-cephalus*. It was probably of this disorder that the Shunamite's child, mentioned in the 4th chapter of the 2nd of Kings, died, and not of the more usual form of water in the brain arising from long disordered abdominal function. It is not a disease of very common occurrence, but occurs often enough to be known to most practitioners, and to be the cause of sudden amazement and grief to too many mothers. Every case which I have seen or heard of, has terminated fatally; and Dr. Golis says—"As those who are seized by this disease, commonly perish before the most active remedies applied at the earliest period, can have time to produce any effect, the object of treatment is little else than to prevent the reproaches of relatives from making

no attempt to relieve or save the patient."—
page 8.

Notwithstanding this disheartening paragraph, with which he closes his chapter on the Water-stroke, I am disposed to think he had seen some of these cases saved; and it may serve to encourage us in our measures, even to the last. For, in an advanced part of his book, in speaking against baths, for what he has called the acute hydro-cephalus (not the present disease), he has these words—p. 121—"and even the stimulating baths (Stutzischen reizenden baden), *by which I have saved so many children, supposed to be lost from other diseases, especially from repelled eruptions.*" But whether he or any one has, or has not, seen this disease cured, it may, and ought, from the admitted cause, to be held rational, humane, and therefore an imperative practice, to use stimulating baths, and afterwards a stimulating (not excoriating) embrocation to the whole of the spine. At the same time, efforts should be made to remove every probable impediment to recovery from the disease, by lancing the gums, opening the bowels, and pursuing every rational



dictate which the peculiarity of the case may present.

Section II.—Idiopathic Effusion or Watery Head.

As in the chest, abdomen, pericardium, scrotum, the feet and the whole cellular membrane, an idiopathic effusion may and does frequently occur, constituting genuine dropsy of those parts; so also in the head genuine idiopathic dropsy is occasionally met with. This term 'idiopathic,' is used properly, I imagine, to express an original disorder in contra-distinction to disorders arising as merely symptomatic or consecutive to other derangements: thus, although inflammation of the chest, abdomen, pericardium, testicle, and oftentimes the skin, has a natural tendency to terminate in effusion, and where such an event does occur, to constitute a hydrops of those organs, yet these are not the cases to which are properly appropriated the terms hydro-thorax, ascites, anasarca, hydrops pericardii, and hydrocele; and persons dying of these effects would be said to be destroyed by inflammation, and not by dropsy of the particular organ. The idiopathic dropsy is doubt-

less always an effect of some previous constitutional derangement, but it being the first disorder manifested, it must, until these things become better understood, be received and regarded as the original disease or fault. This complaint then occurring in the head, it will and does as in other parts, come on imperceptibly, without any sudden or evident disturbance of the mental or organic subserviency of the organ, and is generally first recognised as in other parts, by the mere inordinate size of the part affected (head). And now that the attention is fixed upon the disorder, it will perhaps be observed, that the functions of the head, like the functions of any other dropsical organ, are slightly impaired. It occurs also, like the hydrops of other organs, in persons of a peculiar temperament, called the leuco-phlegmatic, marked by general want of muscular tone, vascular vigour, natural heat, and mental energy. When it destroys the patient, it kills, like the hydrops in other parts, by gradually interrupting the function of the organ it possesses ; and like in other dropsies, the ultimate effect is not ensured so much by the quantity effused as by the celerity with which it is deposited, so that where the progress of the disorder is very slow and regular, the disease

goes on to an extent almost incredible to those who have not had ocular demonstration of the fact. Lieutaud in one case found thirteen pounds of water.

To this form of cephalic disorder is particularly applicable the phrase so generally and emphatically used by the peasantry and mechanics of our country 'a watery-head.' The seat of this effusion varies much, sometimes it is exterior to the skull under the integuments, sometimes between the membranes in the skull, sometimes in the ventricles, and sometimes all these parts are involved in the disease.

There is then an idiopathic disease called in common language a watery-head, the antecedent causes of which are involved in much of that obscurity which overhangs the nature of hydropic affections generally. And these are the cases to which only, in correct appropriation, the term hydro-cephalus ought to be applied. It has a different cause, course, and effect from the water-stroke, and therefore does not demand the treatment assigned for that disease. It has not its origin in the long-continued abdominal derangement hereafter to be spoken of, and therefore calls not for the

treatment there to be recommended. It originates not in phrenitis, and therefore precludes also the anti-phlogistic course adapted to that disease. But occurring as it does in the leuco-phlegmatic constitution, marked as it is by its close analogy in every respect to ordinary dropsies of other parts, differing only in the modification or rather addition of symptoms incidental only to derangement of the organ here affected, it demands upon reason and analogy, and experience sanctions the demand, a treatment analogous to that of other idiopathic dropsies. Air, exercise, and generous diet, aided by the judicious use of a restorative plan of medicine, are and ever must be, the best means of remedying a constitution originally defective in muscular tone, vascular vigour, natural warmth, and mental energy, and therefore they constitute the appropriate practice in this slow disease, and often, happily, are crowned with success in the lighter manifestations of the disorder.

Idiopathic dropsy of the head is peculiar to children. Dropsy of the brain, however, often supervenes upon other forms of the disease in the hydropic constitution, and the patient then dies comatose.

Section III.—Water in the Brain consecutive to Abdominal Disorder, or Hydrocephalus Acutus.

It frequently happens that a child previously healthy falls into a state of disorder marked by mental and bodily inactivity (always indicative of error in children), falling away of flesh, and impaired appetite; on inquiry, the bowels are inactive, and what is passed from them is indurated, scanty, and of stronger smell than is usual for a child. Soon the patient becomes fretful, restless in its sleep, acquires a habit of picking its nose and lips, and its belly becomes contracted (sometimes tumid). In a little time the child becomes stupid and heavy in its appearance and actions; its tongue becomes dry and the mouth parched; flushing of heat comes over the skin, and particularly about the head, pain in the head comes on, with throbbing in the temples and an evident increased action of the carotid arteries. Light and noise now cause pain. Some of the muscles act irregularly, manifesting their actions in contortions of the eye, mouth, hands, &c. These symptoms having had their reign, the patient becomes lethargic, and evinces some signs of what has been called compression of the brain. Out of this

torpor the child sometimes revives, talks rationally, takes some food, seems better, and then frequently sinks into death. Cases having run such a course, perhaps modified in a few particulars, are said to die of the acute hydrocephalus or water in the brain; and dissection always verifies the assertion, that in those instances death has occurred *with* water in the brain. *But the important question is whether death has occurred solely from water in the brain.* There hangs here an abstruse pathological inquiry of considerable importance, and deserving of every attention from the practical interests it involves: whether there be any specific disease, inherent tendency, or necessary concurrence in this series of symptoms; or whether the termination be merely one of the natural consequences of a common deranged state of the alimentary system, which gives as a result from very slight modifications, four different series of effects, each of which series has been treated of by writers as a separate disorder. If the water here found in the brain, together with the other manifest signs of cerebral disturbance, be the mere effect of a deranged state of the alimentary system common to other disorders, then the term hydrocephalus, if at all proper to this

form of disease, ought to be confined to the last effect, which can never be known positively until after death, nor reasonably supposed until too late for remedy, so that its usage is practically useless. That complexity of the subject which writers have made in distinguishing it from other disorders, and that confusion of opinion which has existed as to the exact description of the disease, has arisen, I imagine, from the circumstance of a last effect being taken as a nominative of the preceding symptoms (an usage which is practically bad in the study of all but specific diseases, or those whose symptoms have a necessary concurrence, as the small pox; here the pustular eruption specifies the disorder, and is a necessary concurrence, and an effect to which the specific disorder has an inherent tendency). But the ultimate effect hydrocephalus or water in the brain is not a necessary consequence of the symptoms usually enumerated as the earlier signs of that approaching event. For mental and bodily inactivity, falling away of flesh, impaired appetite, and an inactive state of the bowels, in which what is passed is indurated, scanty, and of stronger smell than natural, constitutes a state as commonly previous to infantile remittent fever, and typhus;

as to hydro-cephalus acutus. So in its advance, when the child becomes fretful, restless in its sleep, and acquires a habit of picking its nose and lips, and its belly becomes contracted (sometimes tumid), this state is as commonly precursory to infantile remittent fever, and typhus, as to the hydro-cephalus acutus. And further, when the child becomes stupid and heavy in its appearance and actions, its tongue dry, and mouth parched, with flushings of the skin, and particularly about the head, with pain in the head and throbbing in the temples, with manifest increased action of the carotid arteries, and with intolerance of light and noise, this is a state common to the three disorders of infantile remittent fever, typhus and hydro-cephalus. And each of these series of symptoms does require the same treatment, whether the termination may prove infantile remittent fever; typhus; or hydro-cephalus; and the sole remedial object is to clear the stomach and bowels, and by a judicious usage of medicine to bring on and keep up the natural secretions of the alimentary organs. If there be time and we succeed in accomplishing this object, we remove a state of disorder which might have confirmed itself in water on the brain, or in a state of complete

typhus, or in a long-continuing remitting fever (being in a child) called infantile remittent fever. Should our efforts prove inefficient in remedying this state of disorder, whether from the inadequacy of our means, or from the too late application of them, then the patient rises into a state of fever having remissions, or falls into a state of typhus, or experiences a more local disorder of the head, marked first by mere fulness, and afterwards by inordinate vascular action of that part. And whichever of these states may be most marked, there will still exist many of the symptoms of the other disorders; and sometimes such a balance of symptoms will exist, as to render it difficult to say which is the best nominal of the disease: and oftentimes where one nominal has been applied (and properly), these symptoms will so vary, as to render one of the other terms more appropriate: hence it is that writers upon these disorders have taken great pains without being rewarded by success, to distinguish their different characters; yet the more observant men affirm, and the practical man knows, that the diagnosis is often very difficult, and that sometimes one disease changes to the other. So variable are the symptoms connected with this state, that the

application of the compound term 'proteiform,' made to it by Dr. Quin, appears particularly appropriate. Amidst all this variety of signs or indications, it is remarkable that there is not one specific diagnostic symptom of hydro-cephalus acutus, and the difficulty of studying the disease is further increased by the uncertain period of its duration, which may be completed in seven or eight days, or may continue to the more protracted period of a month. To render this knowledge subservient to practice, it should continually be borne in mind; and, in drawing any inferences of a practical nature, it must be allowed, and that steadily, to have its full force. For a vacillating practice, unsteadied by reason, but fluttered by every variation of symptoms which can influence hope or fear, will here, for these symptoms are so numerous, inevitably render the head of the practitioner as confused as the head of the patient he attempts to guide; and the consequence, unless a lucky chance which sometimes saves the most desperate vessel intervenes, must be the destruction (and perhaps hastened destruction) of the sufferer.

The state previous to the full manifestation of the disorder, is evidently not a state of

plethora; the alimentary organs have been long inactive, and the system is brought rather, perhaps positively, into the irritable state of the starved man; so that great effects and high excitement may be generated from causes which would otherwise be inadequate to their production. As the starved man, in his weak and irritable condition, may be, by the mere stimulus of an ordinary meal, brought into a state of fever and frenzy, so a child, brought into a state of great weakness and irritability from an inaction of the alimentary organs, may be, from slight causes, even from the untusal acrid stimulus of the contents of the bowels, brought into a state of frenzy and fever, in which it would be no more reasonable to bleed, although those symptoms ran high, than it would be in the starved man. Mere excitement is not an adequate reason for blood-taking, else ought it to be employed in those hysterical and nervous affections of the head, where the labouring arteries, from slight causes, seem to exert their whole efforts to break up the cerebral structure, but in which cases its usage is always deleterious. While there are no adequate reasons for blood-taking in these symptomatic cerebral excitements, there are several most powerful, and, I think, impera-



tive reasons, why it should not be adopted, and why it should be positively interdicted. Experience teaches, that in the weakened, whatever increases debility, increases cerebral irritability, or a tendency to vascular action in the brain; and bleeding, as instanced in the flooding woman, does this in an extraordinary manner. While the experiments of Dr. Seëd not only substantiate the fact of bleeding increasing cerebral circulation, but also the remarkable circumstance of its causing water to be effused in the head. His words are “*Si sanguis plurimus sive ex arteria, sive ex vena efflueret, aqua intra caput effunditur.*” In the two other results of the previous disorder of the alimentary system, the infantile remittent fever, and infantile typhus, which, as has been said, are often difficult to distinguish from hydro-cephalus, and which often alternate or coalesce with it, bleeding has no sanction, but is admittedly improper and universally deprecated. How, then, in hydro-cephalus, a disease having the same origin, sometimes alternating with, or changing *from* them, can the practice of bleeding, if there improper, be here suitable, judicious, and beneficial?

While experiment and reason thus dissuade

from a practice so fraught with ambiguity (not to say danger, or even destruction), we shall have an opportunity, in examining remedies, of pursuing the inquiry further into the result of experience upon the minds of observant men, relative to this practice of blood-taking. The extent to which bleeding may have been carried, and the commonness of its usage in the treatment of this disease, by persons who are guided solely by the precepts of their tutor, be he ever so great, avail nothing, unless the superior success of their practice could sanction its continuance, any more than the heating system formerly adopted in small-pox, although universal, could sanction a continuance of it when reason and experience so decidedly advocated the cooling plan in the more limited practice of a few persons.

TREATMENT.—In the earlier stage of disorder of the alimentary system, preceding and common to the development of many diseases—and marked by mental and bodily inactivity, falling away of flesh and impaired appetite, and in which on inquiry, the bowels are found inactive, and what is passed from them indurated, scanty, and of stronger smell than is natural for a child—the use of repeated gentle aperients is

indicated to reason, and experience proves practically their almost unfailing remedial powers. The number of incipient diseases cut short by their judicious usage, is immense, and only fully known to the attentive and scrutinizing understanding of the reflective practitioner; while their palpable and glaring benefit is familiar to the discernment of the most cursory observer. By their timely employment, an advancement to the most unmanageable disorders, which, when fully manifested, almost defy control, may be easily and speedily retrograded, the natural and healthy functions restored, and the primitive mental and bodily activity, plumpness, and relish for food, regained. So in the next stage of the advancing disorder of the alimentary system, in which the patient becomes fretful, restless in sleep, picks its nose and lips, and has a contracted (sometimes enlarged) belly, the use of repeated gentle aperients is more forcibly indicated, and experience proves the adequacy of their remedial powers to the restoration of the primitive health. So in the still further advanced stage of disorder of the alimentary system, in which a sympathetic affection of the head is manifested by a stupidity and heaviness in the appearance and

actions of the child, repeated (but now active) aperients are indicated; and now that from neglect or inefficiency of previous measures, the disorder of the alimentary system has so far advanced as to manifest exceedingly depraved, or else very deficient secretions from the alimentary organs, the aid of some active agent to the removal of the present contents, and improvement of the future secretions of the alimentary system, is imperatively and hastily demanded.

“ Now be Celsus called, the Fates come rushing on,
The rapid Fates admit of no delay.”

Fortunately for the benefit of the patient, for the honour of physic, and for the happiness of families, there is a medicine of remedial adequacy to this far-advanced disorder, of which experience sanctions Dr. Golis's encomium:—“ Of all medicines which have been highly praised for the acute hydro-cephalus, calomel is the most efficacious; in the turgescence (the stage we are now contemplating) and at the beginning of the inflammatory stage, I may almost call it a specific; it excites as it were an *abdominal or intestinal ptyalism*.” In another place he speaks of it as the “ divine remedy.” Universal sanction is, I believe, in this stage of the disease, inclined to its usage, and

the main point here to be enforced is, an implicit reliance upon its powers, to the exclusion of time-stealing experiments with other drugs. A combination of other medicines (particularly antimony) may be made with it, but only as subservient auxiliaries, having no claim to equality. The extent and frequency of its dose should be regulated solely by its effect; the objects to be attained being a removal of the contents and a restoration of proper secretions from the bowels, and its specific action in relieving from the present stupid and heavy appearance and actions. The effect most to be avoided is inflammation of the mucous membrane of the intestinal canal, to be foreseen by sharp pains with great griping in the belly.

If this state be not speedily removed, one of its natural sequels is a state of high cerebral excitement, manifesting itself in great pain in the head, throbbing of the arteries, intolerance of light and noise, and great heat of the head; this has been termed the inflammatory stage of hydro-cephalus acutus, upon which some difference of opinion exists, deserving consideration. Some writers contend, that this state of the head is *first* in that series of events which leads to water in the brain; while others

contend, that it is not so, but only a secondary consequence, depending upon a previously deranged state of the alimentary organs ; and much controversy has been carried on respecting these points. When these opposite assertions are made, nothing can be more evident to the observant and practised man, than that different forms of disease, having the same termination, are contemplated by the opposing parties ; and here arises the practical evil of designating a disorder from its termination. Each man takes instances of death having occurred, in which dissection shews water in the brain ; each describes its mode of occurrence ; each has an equally appropriate nominal of his disease (if a sequel can be appropriate) ; and yet they differ as to the description of a disease, supposed to be specific : and out of this arises much of the difference of opinion upon the important practical point of bleeding. The degree of cerebral excitement is not, as is recommended by some, a proper indication for bleeding ; for high cerebral excitement is a common incident in nearly all cases of exhaustion, whether from excess of bleeding, discharges, inanition, or long-continued irritation, or mental suffering. The precept for judicious bleeding can only be founded upon the state of the

patient's powers. "In healthy, active, strong, plethoric children, particularly after violent agitation of the brain," says Dr. Golis, "blood may be drawn;" and in this judicious precept, every thoughtful and practical man will concur, as it will only embrace those cases of sudden or rapid cerebral disturbance to which those writers allude, who apply the term hydro-cephalus to idiopathic inflammation of the brain terminating in effusion. But in the disorder which we have been contemplating, and to which custom has sanctioned the usage of the term hydro-cephalus, because of its frequent tendency to that termination, this precept will not sanction bleeding; for the patient who has come through the previously described abdominal disorder to a state of cerebral excitement, will be neither healthy, active, strong, nor plethoric; but, on the contrary, unhealthy, inactive, weak, and exhausted. So that to its state, those cautions and forewarnings of danger from bleeding, which experience has dictated, are here most, indeed only, in point. "In feeble and exhausted children, in cachectic individuals, in acute hydro-cephalus following contagious apthæ, in hydro-cephalus in larger children, following too intense study," authority and experience raise

a warning voice, and foretel a rapid sinking, or sudden death, if disregarded.

The greatest curse of bleeding is its temporary apparent benefit, which disguises its future and latent destructions. A weak and exhausted patient, labouring under high cerebral excitement, seldom fails to be calmed for a time from bleeding, and this evident temporary good is noted as a consequence of the previous measure; when, however, the patient, as is nearly always the case after a few hours, rises again to a state of higher cerebral excitement, this previous measure (bleeding) is lost sight of, and the virulence of the disease is the reputed cause; and yet, experience teaches, that all undue blood-letting produces cerebral determination, and that animals destroyed by bleeding get gorged heads. Another bleeding is probably instituted, and the patient is again calmed, from which the disease again arouses him with redoubled violence, if sudden death or rapid sinking do not intervene. Depletion is continued until the scene closes, and then dissection substantiates *the skill and foresight* of the practitioner, who has predicted water in the ventricles:—but it may be important here to know, that almost any animal *may be made*

to die with water in its brain by frequent and excessive bleedings. “*Si sanguis plurimus sive ex arteria, sive ex vena efflueret, aqua intra caput effunditur*”—says Dr. Seed. Water being afterwards found in the brain, is, therefore, nothing in extenuation of previous bleeding in them who die hydro-cephalic.

In that progress of the disorder we have been contemplating, where we see it advanced to a state of high cerebral excitement, reliance is still to be kept upon the free and repeated use of calomel; but considerable benefit, or rather relief, may now be derived, by the continual application of cold lotions or iced water in bladders to the head; it will also be desirable, to keep as much of the blood as possible circulating in the lower limbs, by the use of stimulants and warm baths to the legs.


Should our endeavours here prove ineffectual, either from the lateness of their application, or from their inadequacy, the natural progress of the disorder is, to change into a state marked by convulsions, stupor, blindness, sometimes palsy of one side, and deafness: soon after which (from ten to twenty hours) there is almost universally what may be termed

the running down of organic life—pulse exceeding quick, and then intermittent—hand heated, then cold and pale—breathing irregular, short, and quick, the air expired becoming cold—feet cold and puffed—the actions of the heart tremulous—rattling in the throat, with relaxed jaw—convulsion—death. In this last stage, marked by stupor, convulsions, and blindness, Dr. Golis says, there remains for the unhappy patient only a palliative treatment; and so fatal is this case, almost universally, that such a maxim may be received as the general law: there are, however, exceptions, and cases are on record, in which convulsions, blindness, and delirium had taken place, and the patient was supposed to be dying, and yet there has been recovery, and also restoration of the sight.

Whatever difference exists among writers as to the possibility or probability of recovery from this stage of effusion, there is none as to the propriety of administering the digitalis purpurea or foxglove, in conjunction with calomel, from which recovery has, in some instances, I believe, occurred; but, if this be denied, there still remains the testimony of Dr. Golis, to its use as a point of humanity;

he says—"it renders the violent convulsions, which indicate the last stage, far milder, and prepares a gentler death than commonly takes place without it." I shall close these observations by a further extract from Dr. Golis :—"I refer physicians to the excellent remarks of the two Wenzels, and freely declare with them, that a painful process at this period of the disease, as blisters over the whole hairy scalp, great caustics or burnings with hot irons in the nape of the neck, and other parts of the body ; which, in a few other diseases, may have good effects, are here *useless, aggravate the pitiable state of the sufferers*, and are honourable neither to the heart nor the head of the physician who applies them."

There are several other disorders, in the natural termination of which, dissection demonstrates death to have occurred with water in the brain, and to which, consequently, if the sequel to a disease could be its appropriate nominal, the term hydro-cephalus might be applied. The disadvantages of such an arrangement, however, must be so apparent, both in obscuring the nature of these diseases from the understanding, and also in confounding practical measures, that the propriety of keeping



these forms of disorder distinct, and of treating of them under the more characteristic appellatives of the diseases to which they are but sequels, must be evident to every reflective mind; and, although I have in the preceding pages considered, in acquiescence to general usage, a train of symptoms or morbid events, under a term not applicable to them until the nearest approach to death, yet, throughout, I have disclaimed the propriety of such usage, and have endeavoured to shew, and at the same time remedy, some of its practical disadvantages.

CHAPTER IV.

ON IDIOPATHIC INFLAMMATION OF THE BRAIN AND ITS MENINGES.

THE brain, and its coverings, in common with all other parts of the body, are susceptible of inflammation and its consequences. And here, as in other parts, the disease may vary so much in degree as to warrant, for practical purposes, a division into two kinds : viz. acute and chronic. The rapid tendency of acute inflammation of the brain or its meninges to destroy the patient, renders a hasty and harsh practice, although replete with many evils, an imperative duty ; and the wisest conduct of a practitioner consists merely in substituting lesser evils for greater. For, knowing the destructive tendency of the disease, and being ignorant of other efficient remedies than those which act violently on the circulation, necessity compels the adoption of them with all their concomitant evils. In the chronic or slower inflammations of the brain, there is not that rapid tendency to destruction, and conse-

quently time is afforded for the operation of slower, but, at the same time, safer remedies. The division of inflammation into acute and chronic is further enforced by the circumstance, that although we are ignorant of any essential difference in the nature of inflammation (chronic or acute) except in degree, yet experience teaches that bleeding, in the slower or chronic kind, is often a mean of aggravating the disease. Between a well-defined case of acute inflammation of the brain and a well-conjectured case of chronic inflammation of the brain, there must exist an immense variety of degrees, calling for the exercise of judgment in the adoption of curative measures; but there is no supposable line of demarcation. And in no part is the practice of medicine, perhaps, more strictly conjectural than in those cases of cerebral inflammation, which are between acute phrenitis and the lowest state of inflammatory action of the brain.

Section I.

Acute inflammation of the brain, as an idiopathic disorder, is much rarer than is generally supposed, and has often been confounded with a mere highly-excited state of the sensorium

A well-defined case of phrenitis is marked, as well as by all the symptoms of ordinary excitement and delirium, with a peculiar expression of horror, a sense of constriction across the chest, by a peculiarly hard and rapid pulse, and by an irritable state of the stomach. The most common result of this diseased action in the brain is effusion, upon which come on all the ordinary symptoms of what has been termed compression, and the patient dies comatose. Sometimes, although rarely, an abscess forms in the brain, from a more circumscribed action of this disease.

It is of much practical importance to have this disease clearly distinguished before commencing the rigorous treatment required for its cure; and, as cases of high excitement are more likely to be mistaken for phrenitis, than phrenitis to be considered merely a high state of sympathetic excitement, it is well to have the pathognomic signs of inflammation well marked before the required treatment be adopted. I mean that cases of idiopathic acute inflammation of the brain and its membranes are comparatively rare (at least in this country), its required treatment is very decisive and rigorous, and therefore before proceeding to

the harsh, and, if the diagnosis be wrong, *destructive* measure to be recommended, the case ought to be well and palpably marked by its own peculiar diagnostic symptoms; and, unless we use great caution, we may fall into a common error in mistaking a merely high state of excitement for inflammatory action; while we shall seldom make the error of considering idiopathic inflammatory action of the brain a mere state of excitement.

The most common known cause of idiopathic phrenitis is the exposure of the head to the direct rays of the sun, upon which come on (and it may occur to all ages, sexes, and conditions, the plethoric and debilitated) the denotements of extraordinary excitement together with its own peculiar pathognomic symptoms of inflammation. Such a case occurring, the patient is to be confined in an almost erect position, and as large a quantity of blood as the person's powers will warrant abstracted as suddenly as possible; by which syncope should be ensured. The head should then be shaved and kept constantly wet and cold, if possible, by iced water in a half-filled bladder. This application of cold to the head should be constant, because a temporary application of

cold only serves to excite re-action, as is seen in the cold-bath, in cold washings, and in the temporary subjection to cold air. The active operations of, and secretions from the bowels should be as soon as possible secured, and a catharsis maintained during the whole cure. As much circulation as possible should be kept in the lower extremities, by the means of stimulating embrocations or other frictions; while the diet should be low, simple, and cooling. Upon the utility of blistering the head, opinions vary. I do not recommend it, because the application of cold is, in my experience, of more worth; on the nape of the neck, however, a blister is (in the estimation of those who consider them sedative to the general system) rational; and general assent, I believe, is favourable to their usage. In cases of idiopathic phrenitis occasioned by poison, the stomach must be emptied prior to all other exertions.

Section II.

THE brain is also subject, more especially in great drinkers, to an inflammation, which is insufficient in degree to give those palpable signs or manifest symptoms which the more

acute inflammation of that organ evinces. This state generally advances by such slow steps, that manifest aberrations from the patient's usual feelings and condition in those particulars which afford the common symptoms of disease, are not observable to himself or family :—thus, although the patient has an unhealthy heat of skin, too quick a pulse, an improper tongue, undue thirst, confusion of head, indecision of character, and is become unusually irascible in disposition ; sleeps ill, falls away in flesh, and is become haggard in his appearance ; yet all these particulars have advanced so slowly, and insinuated themselves so gradually, into the view of every one interested, that an unsuspecting familiarity is formed with them, almost without a knowledge of their existence. And it is not, perhaps, until some arousing domestic calamity, some irritating private offence, some jangling broil, or some strong mental emotion occurs, that the patient is brought into the physician's field of observation ; and then, probably, he is found in the pitiable, dangerous, and frantic state of madness : all the marks of inflammation of the brain are now pictured in their real and vivid colours, and the “ enemy who hath stolen away the senses,” hath a triumphant dominion.

A somewhat similar state of head may exist from other causes than drunkenness ; it may arise from intemperance in study, intemperance of the passions, or intemperance in any intellectual pursuits. Instances of intemperate study usually have something like the following course.—A young man is desirous of making a distinguished figure in acquirements, of taking high academical honours, or of attaining some given point dependent upon intellectual exertion ; this he endeavours to accomplish by long and unremitting application, in which his hours of sleep are shortened ; the regularity of his meals interrupted ; air, and bodily exercise neglected ; and thus a complete state of constitutional disorder is unsuspectingly brought on, and unconsciously kept up, until that sleep which heretofore had voluntarily been foregone cannot be recalled, but sleepless nights or agitated and tumultuous slumbers, which recruit not, wait only on his pillow. Now the head becomes painful, unsteady in its intellectual subserviency, and the patient confused in his ideas. His manner now becomes strange, his actions absurd, and he falls probably into some flagrant enormity of conduct, which arouses the attention of his friends or companions, and perhaps escapes not the

cognizance of the magistracy. On a retrograde investigation, the whole series of events are traced to their proper cause; but the patient is now in a state of temporary insanity, with inordinate vascular action, and inflammation of the brain, "much study having made him mad." The course is much the same from the inordinate indulgence of passion, or intemperance in any intellectual pursuit; they lead to the same glaring manifestations of insanity and symptoms of inflamed brain, only modified by the original cause; love, hatred, ambition, pride, regret, or some other passion or pursuit marking a peculiarity in the patient's character and conduct. Religion is no uncommon cause of cerebral and intellectual disorders in persons previously disposed to insanity; and some indiscreet fanaticism is generally blamed; but whether justly—whether it arises from the natural intensity of the interest of that subject, or whether from the injudicious zeal of its ministers or advocates—it is useless here to inquire, its recognition as a cause is sufficient for every practical purpose.

It has been usual in the teaching of medicine, to make a distinction between inflammation of the brain and *vesania* (madness); the latter

has been defined disordered mind without fever, and divided into mania (raving madness) and melancholia (melancholy madness), this latter was formerly thought to be occasioned by the presence of black bile, hence its name. This distinction, however, of *vesania* from *phrenitis* (although useful in commencing the study of diseases of the head) may be carried too far, for nearly all fatal cases of *vesania* are proved by dissection to have had co-existent slow inflammation and its consequences in the brain: and anatomical research finds the same consequences in the head of the patient who is said to die of slow inflammation of the brain, and in the patient who is said to die from madness. The most usual appearances within the heads of those who die maniacal are—opacity, and thickened appearance of the membranes, greater vascularity of the membranes, and effusion into the ventricles or between the membranes and convolutions, changed density of the medullary structure, and sometimes suppuration:—these are exactly the morbid appearances which are received as the post mortem indications of antecedent inflammation.

When acute idiopathic inflammation of the

brain has produced phrenzy, a cure should naturally be attempted by the removal of the cause, and a decisive antiphlogistic plan rigorously adopted. But in these slower cases, where disorder of the mind and the inflammation of brain are rather concurrent effects from remote causes, or if dependent the one upon the other, it is difficult to say which is cause and which effect, a harsh adoption of the antiphlogistic system is neither indicated by reason, enforced by experience, nor can it be tolerated from its effects; for a rapid sinking attended with signs of compression, or else symptoms of typhus, soon follow in these cases, plainly bespeaking the baneful error of such measures. Chronic inflammation of the brain, produced by the abuse of wines, spirits, or other fermented liquors, can no more be cured by rash and repeated bleedings, than inflammation of the liver, eyes, legs, or other parts, from the same cause. Gradual (not sudden) reformation from the habit or cause, aided by local bleedings, rather with a view of moderating than curing, must be the basis of a rational cure in chronic inflammation or manifest insanity from drunkenness. So in chronic inflammation of the brain, manifesting itself in conjunction with insanity from intellectual causes, a rash de-

pleting system can no more be borne, and is no more called for by reason, than such a practice for the jaded and inflamed shoulder or the worn-out and inflamed foot, of the over-worked and exhausted horse. It may be, and is difficult to understand, how the brain is subservient to the intellect ; so it is to know how the foot is subservient in motion to the intellectual faculty of the will ; but, as the will can intemperately use the feet until they inflame, the same of the eyes, so can it intemperately goad on the brain in its subserviency, until it inflames, where some overbearing passion or feeling influences it : and the natural indication of rest in the one instance is as strong and as indispensable as in the other, and is equally the basis of cure in both. The cure, therefore, of these slower inflammations of the brain, whether from intemperance in wine, spirits, or other fermented liquors, or from intemperance in the passions, or any intellectual pursuits, is to be attempted upon the basis of a gradual removal of their causes, aided by such remedial measures as obviate any temporal evil. The most commonly urgent symptoms in these cases arise from cerebral excitement, and undue vascular action in the head ; for these the application of cold, the douche, and

occasionally (if the turgescence be *very* great) *local* bleeding by cupping on the nape of the neck, are the most appropriate measures. A most distressing symptom in these cases, and one which aggravates every other evil, is a state of constant watchfulness; to remedy which, is a point of very first consideration, but of considerable difficulty. In the first bursts of insanity, when the vascular action of the head is much aroused and accompanied with violence of manner, the tartarized antimony in considerable doses appears to be the most appropriate and beneficial remedy; it subdues vascular action, calms the violence of the patient, and is frequently followed by sleep and gentle perspiration—all desirable points: it has also a tendency to excite the secretions from the bowels, and to quicken their expulsion. Opiates are inadequate to the production of sleep, and, in many respects, objectionable. In the more obstinate cases, and yet where sleep is indispensable, there is nothing more effectual in accomplishing the object than the whirling-chair. Another temporary evil arising in these cases is an obstinate state of costiveness, which must be remedied. A constant refusal of food is sometimes attendant upon this state, which should always

be over-ruled, as nothing has a more certain effect in increasing morbid irritability of body than positive abstinence.

These slower kinds of inflammation of the brain are, however, frequently involved in much of that obscurity which overhangs chronic inflammation of other parts; so that while we can plainly discern the effect, the cause is completely hidden from our understanding. A question might here arise as to whether morbid growths sometimes found in the encephalon, be not also from inflammatory action. These slower kinds of inflammatory disease of the brain may be inferred, and their required treatment adopted, when a pain of the head is constant, or very frequent, continually in the same spot, much aggravated by excitement, accompanied by those symptoms denoting sympathetic fever, and irascibility of temper, and emaciating. These are the cases to which, beside the usual constitutional treatment for slow inflammations, setons, issues, repeated blistering, tartarized antimonial ointment, and other local irritations appear particularly applicable.

The most common termination of inflamma-

tion in the brain, when fatal, is by effusion; and this, whether the inflammation be of the acute or chronic form. More rarely it terminates in suppuration; frequently it leaves a thickening of the membranes; and sometimes dissection shows a softening, at other times a hardening, of the medullary structure. The treatment is not influenced by an anticipation of any particular termination; neither are the peculiar causes of the different morbid modifications known; nor are there any fixed diagnostic symptoms conclusively marking to the judgment these different results of disease. And the only fair inference which can be made in distinguishing any of these consequences is when effusion occurs, and then the gradually supervening symptoms of compression support the conclusion.

CHAPTER V.

ON CEREBRAL IRRITATION.

BY far the most common form of cephalic disorder is that state which is best denoted by the terms 'cerebral irritation,' the leading feature of which is head-ache. Its causes are numerous, and its concurrent symptoms various; from which has arisen a confusing multiplicity of terms and distinctions to denote an identical disorder; hence cephalalgia, nervous head-ache, bilious head-ache, sick head-ache, rheumatic head-ache, &c. &c. The objection to these terms is, that they are apt to become a source of error in the treatment, by leading to the supposition, that the presence of bile and sickness are the *causes* of the head-ache; instead of which, they are generally co-existing *effects* only of cerebral irritation; while the varieties of diseases of this genus are far from being embraced, even in the numerous terms adopted for their distinction. The predisposing cause to this state is nearly always debility, with which there is almost

universally conjoined irritability of head. Thence it is, that exciting causes whose influence in a more healthy and less irritable state would not be felt, are rendered capable of producing effects scarcely surpassed by the action of virulent poisons. These effects vary much in number, combination, and intensity; and the following is but a partial enumeration of some of the distressing consequences of this disorder:—pain in the head; intolerance of light; intolerance of sound; and intolerance of motion; throbbing or violent beating in the temples, or through the head; nausea and vomiting, sometimes bilious, but mostly acid, the acid often of great strength; heat of head, watchfulness, sleep disturbed by alarming dreams, the patient waking frightened; the tongue white, feet cold, and general disposition to be chilly; the excitement sometimes runs so high as to constitute delirium. And some of the numerous cases of insanity, and chronic inflammation of the brain, originate probably in protracted cases of this disease.

In order to comprehend the nature of this frequent, distressing, and important class of diseases, it is necessary to recall to mind the circumstance of life being perfected in the

head of the animal, and the necessity of the organs of which the head is composed being brought by organic excitement into an efficient degree of power to effect a due relation with the natural laws of the material world. And this, however low the organic powers may be, must be kept up, otherwise the person ceases to live. Now this is accomplished in the atonic, the hæmorrhagic, the dyspeptic, and, indeed, in all weak and debilitated persons, at the expense, or by a sacrifice, of other parts; and if there be too little blood for the whole system, by a preservative law in the animal economy, the head will be kept excited to its proper point, while the feet and hands may be left cold, pale, or leaden-coloured. Although by this preservative law, as perfect a life is constituted in the weak and debilitated as in the powerful *athletæ*, yet there by no means exists the same capacity for extraneous or voluntary excitement; but the pleasurable muscular volition and pleasing excitement of the one, might prove a fatal exhaustion to the other. And so that degree of light, heat, noise, and stimulus, which afford only pleasurable excitement to the athletic or well-conditioned, give a distracting head-ache and sickness to the ill-conditioned and weak; thus

driving him, by a friendly and salutary though painful warning, from an impending consequent exhaustion, which might prove his destruction if provoked. In this peculiar state of the system, irritating causes which in the better-conditioned are passed unheeded from their trifling effect, act with immense force, and produce great, often alarming, disorders of the head. These causes may be divided, for the purpose of treating perspicuously and concisely, into alimentary, muscular, sensual, mental, and sexual.

So far as the *alimentary* system is concerned in the immediate production of cerebral irritation, the cause is most frequently in the stomach; there, from an excess in quantity, or from the improper quality of aliment, is originated pain and other symptoms of irritation in the head, to which is generally conjoined sickness with acidity. This sickness and acidity do not appear to be the cause of head-ache, &c., but rather a consequence of the previous cerebral irritation; the series of events in the generality of these cases seeming to warrant the opinion, that the impropriety in quantity or quality of aliment first disorders the functions of the brain, which,

in its turn, reflects further disorders on the stomach; of their mutual influences there being no doubt. Vomiting, in these cases, relieves the distress of stomach, but the cerebral irritation very rarely subsides without sleep. At other times, it happens, but it is comparatively rare, that the primary functions of the alimentary system are perfected without any cerebral disturbance, but that four or five hours after food-taking, a disturbance of head is experienced, often combined with distress of the chest; when these paroxysms observe a regularity in period after food-taking, there is great reason to believe them connected with the alimentary functions performed in the duodenum, and the success of the practice having such an opinion as its rational basis supports, and indeed confirms the truth of such opinion. Depraved secretions, or secretions too long retained in the duodenum, are also a frequent cause of head-ache. A more permanent cause of cerebral irritation, however, frequently exists in the alimentary canal. If the excrement, *fæculæ*, or refuse of the aliment, suffer an undue retention in the lower bowels, it acquires, from two or three circumstances, an unusual acrimony, as well as an accumulation in quantity; from this, a large

surface of an irritable portion of the body (the intestines) is kept in a state of unnatural excitement, and there consequently results a continued state of febricula, marked by slight heat of skin, rather quickened pulse, slight thirst, white or slight brown (always loaded) tongue, and continued or very frequent headache. Sleep is disturbed by dreams or sudden waking, and in the morning the mouth is offensive in smell, taste, and appearance: the appetite soon suffers, and the patient goes on for an indefinite period labouring under an anomalous disorder, the leading feature of which is continued or very frequent headache. This undue retention of the *fœculæ* of food, then, together with the abdominal secretions, or, in plainer terms, this constipated state of bowels is another and third source of cerebral disorder from the alimentary system. This error in the alimentary system is the fruitful source of a multiplicity of diseases if neglected, and hence, in a retrograde view of the course of many fevers, and also of a multitude of chronic disorders, they may be traced to have originated in this error of the constitution.

The rational means of avoiding and removing

these exciting causes of cerebral disorders are too simple to be much dwelt upon. The stomachic disturbance, whether from error in quantity or quality, may be removed (especially if there be a natural inclination towards it) by vomiting, which may be followed by a gentle aperient; the cause being removed, sleep is the essential mean of restoration. Habitual vomiting, however, is much to be deprecated, as nothing tends more to render the stomach fastidious, so to speak; and, if the habit be persisted in, the stomach will become uneasy and nauseate almost every species of food, however light or free from offence in its ordinary nature. In the duodenic disturbance (this generally occurs in the night) the lightest fluid form of diet must be substituted, with which may be conjoined some gentle medicine, to hasten the progress of the food into the lower bowels. In most cases, however, it is not conquered until supper-eating be given up altogether. In the removal of the third alimentary cause, aperients are simply indicated in the earlier cases; but, as it often and indeed generally happens, that these cases have been neglected until the abdominal secretions become deranged, before they are made known to the practitioner, mercurial and

antimonial alteratives are also required in conjunction with aperients, for some little time, before a natural and healthy state of bowels and head can be restored.

Another very common source of cerebral irritation may be found originating in *undue muscular exertion*. There are many persons of weak constitution, to whom walking exercise, if carried to any extent, is a certain cause of head-ache, and the other accompaniments of cerebral disturbance. Long standing also in these persons produces the same effect. The common, and, as it may at first appear, simple exertion of standing, may seem to the cursory observer inadequate to the production of so great effects. But if the peculiarity of the human skeleton be contemplated, and the circumstance of man standing upon two supports only, by which but little mechanical advantage is gained, be borne in mind, the necessity and actual employment of great muscular action in the acts of standing and progression will become manifest. And the known effect of voluntary exertion in producing excitation of the head, will render intelligible to the reflective, how, in the weak, irritable, and exhausted, the mere acts of too long standing

or walking may produce inordinate cerebral irritation. . Rest and sleep are here the natural remedies.

This peculiarity of the human skeleton, and the consequent great muscular action essential to the erect form, involves some curious circumstances in the treatment of human diseases, and imposes a necessity of the recumbent position in the treatment of inflammatory diseases generally, the erect position requiring continual muscular exertion. I have observed, especially among labouring people, mild (or rather bastard) forms of fever, pneumonia, pleuritis, and abdominal inflammations which have resisted the usual measures of routine practice, immediately begin to subside, and in two or three days effectually cured, by confining the patient to his bed, although unaided by any efficient medicines.

Sensual intemperance, or an intemperate usage of the organs of the senses, is another cause of cerebral irritation of very common occurrence. And intemperance in this instance, as also in wine, is not dependant so much upon any given quantity of excitement as upon the capacity, or rather incapacity, for

bearing it. That light, noise, heat, &c., which to the healthy and strong is a mere sensual source of pleasurable excitement, proves to the weak and exhausted, a distracting cause of cerebral and febrile irritation ; so the pint of wine, which to the strong and healthy gives only a pleasurable exhilaration, will irritate to a temporary delirium the exhausted and infirm. Hence it is, that in a party composed of ten or twelve persons, the pursuit of pleasure is seldom attended with gratification to all, for that sensual excitement which is essential to the gratification of the stronger, will prove a source of cerebral pain to the weaker ; and the termination of these pursuits, whether in plays, balls, excursions, feastings, musical parties, more solemn pursuits, or what not, always evidences, in the facts of numerous head-aches and other attendants of cerebral excitement, the truth of the incapacity of weak persons to cope with the strong in sensuality. Sleep is here the natural cure.

A long continued *intemperance in mental pursuits*, I have enumerated among the causes tending ultimately to the slower kind of inflammation of the brain. An intemperate fit of study, however, or intemperance in any

intellectual pursuit, and great or sudden emotions of the mind, prove sometimes the cause of a cerebral irritation, which will not entirely subside for several (sometimes many) days, although aided by judicious measures for its relief. In these cases it would appear that time is as essential to a recovery as in cases of sudden or excessive strainings of other organs; and reason and experience teach and sanction a temperate and patient treatment for the restoration of these cases.

The debilitating effects of *sexual intemperance* renders it another source of morbid irritability, and no part participates more in this morbid state than the brain; hence sexual intemperance may be found more frequently than is imagined the predisposing cause to headache and the other denotements of cerebral irritation. And, indeed, all sexual debility, whether from excesses or disorder, appears to be conjoined with morbid irritability of body *and of the head in particular*, as is evidenced in that multiform disease of females termed hysteria, where weakness and irritability form a constitution so peculiar, that causes, more particularly mental causes, act with a violence, and in a varied manner, truly astonishing:

among these numerous effects may be enumerated, the sensation of a nail being driven into the brain, the sensation of the brain being cleft in two, a sensation of bursting in the brain, a sensation of the brain being violently girded, visual illusions, illusions in hearing, violent convulsions, epilepsy, bastard apoplexy, &c. &c. While sexual debility in men is the frequent concomitant of hypochondriasis, weak and irritable disposition, mental illusions, headache, somewhat similar pains to those before enumerated in the female, epilepsy, insanity, &c. &c. Bleeding in these cases is inadmissible, and always aggravates the disorder.

The judicious treatment of the affections considered under the terms 'cerebral irritation,' consists, then, in removing and avoiding the recurrence of the exciting causes; and in overcoming the morbid irritability of the head, by improving the tone of general health, which can only be accomplished by appropriate diet, exercise, and medicine. In none of these cases is bleeding proper, for the temporary alleviation which is sometimes (and only sometimes) experienced, is heavily outweighed by the great aggravation of symptoms often following it, and by the subsequent frequency of attacks;

and, if often persisted in, by the fatal termination of the disorder. In the paroxysms of irritation the greatest temporary alleviation is generally found in the application of cold to the head ; but in two or three instances, where the pain was confined to one side of the head, I have suddenly arrested all the symptoms of the paroxysm by gentle continued pressure of the thumb upon the carotid artery.

CHAPTER VI.

ON THE ADYNAMIC HEAD.

BESIDE the disorders already enumerated, to wit, the blood-stroke and its consequences, the water-stroke, the watery head or proper hydrocephalus, the abdominal disorder terminating in cerebral disease with water, inflammation of the brain acute and chronic, and the irritated head, there exists a state of head which is perhaps best designated by the terms 'adynamic head,' in which the functions of the senses are not powerfully accomplished, and consequently easily suspended. The great leading features here are a disposition from slight causes to vertigo, fainting, coldness of the extremities, and general chillness of the whole frame, the action of the vascular system weak, and the manner of the patient inanimate. It would seem to be dependant upon a general weakness and imperfection of the whole organization and functions, for the appetite is generally defective and the whole of the alimentary functions slow and weak; the action

of the heart and whole vascular system is also deficient in force and energy, and the blood defective in redness; hence the body has neither a genial warmth, nor the skin a natural depth of colour; the breathing is somewhat slow, and the expired air cooler than natural; the muscular system is also defective in power, the animal movements are slow, and fatigue soon follows; the absorbents participate also in the general debility, and hence there prevails a tendency to swollen feet and hands; in females, the uterine system also manifests its share of the general defection in amenorrhœa. This general weakness of the organization and inanimate manner, together with an inactivity in mental pursuits, gives a tone of constitution to the individual known by the term Phlegmatic. This state of head, as well as its tendency to syncope, is subject from very slight causes to temporary pain and beatings, but which soon subside on keeping quiet; and hence, although the recurrence of pain and beating is very frequent, the patient complains but little of the head; and hence, also, this state is seldom denominated a cerebral affection, but takes its nominal from some other leading feature or more prominent symptom, as anorexia, amenorrhœa, anasarca, chlorosis,

vertigo, syncope, amentia, &c. I am not disposed to enter into any debate as to the best nominal of this disorder; nor is it of any consequence so long as the state be understood; but the cursory observer may think it carrying the matter too far, to consider those complaints in connexion with disorder of the head. They have, however, a natural connexion with the adynamic head, although they do not arise from it; and a consideration of that state of head, beside its own importance, is essential to the understanding of some of the more complicated cerebral affections, and therefore could not be dispensed with.


The subject-matter of the preceding chapters, and the few observations upon the adynamic head made in the present one, constitute the ground-work, or basis, or essential preliminaries to an understanding of the more *complicated forms* of disordered head which so frequently occur, and which prove so bewildering, and surprising, and capricious to the practitioner; which blind him in his prognosis, disappoint him in his measures, set at nought his remedies, and disgrace his art. It would be an endless task to attempt an enumeration of all the varieties which complications of these

conditions may afford, or even to enumerate all the modifications which one has seen; yet a comment or two upon the most frequent forms of complicated cerebral disorder, may not be unacceptable; and, as the puerperal state, of all others, affords the most complex, variable, and difficult cases, I shall dedicate a page to the consideration of that important subject.

On the Puerperal Head.

When a woman is delivered of a child, she suffers a loss of bulk equal generally to about 14 pounds; viz.—child 8lbs., liq. amnii 3lbs., placenta $1\frac{1}{2}$ lbs., blood $1\frac{1}{2}$ lbs. = 14lbs. From this sudden diminution of bulk, she, like the woman tapped for dropsy, becomes adynamic and has a tendency to faint from very slight causes; hence our practical directions are, to bind up the body, avoid the erect position or even suddenly sitting up in bed, and to nourish the system by mild food, to which may be advantageously added, with the first food, some stimulant (as brandy); and, also, in the form of medicine, some slight stimulant may advantageously, for the first thirty hours, be administered. This state of head is, of course, much increased and more dangerous

in the patient whose head had been naturally adynamic previous to her confinement; and if, in such a case, food be not early, and indeed frequently, administered, the patient may faint, and if she faints she dies, unless instant aid be afforded. Soon, however, after delivery, with a little management, this great tendency to faintness goes off, and the patient falls naturally into an inanimate calm, and sleeps lightly, and this state lasts for many hours, so that the report on the day following delivery, however bad the case may have been, is nearly always in one phrase, to wit—"the patient is as well as can be expected." During this calm the system recruits itself for new functions, and a rapid absorption is made of some of the structure of the uterus (and it is a remarkable fact, that most animals eat the placenta) the body thus partly nourishing itself from its own structure. In some period between fifty and seventy hours after delivery, a complete change takes place and the whole system is aroused to accomplish a new function. The state of head is now entirely changed, and instead of being adynamic becomes irritable, and every part of the body participates in this irritability; and hence the patient is tender throughout her whole frame:



sometimes she becomes delirious, the delirium appearing to be connected with pressure or fulness of head. As this is an important and highly critical period, and any abdominal irritation may, and will assuredly, add a morbid degree of excitement to this naturally high degree, it behoves every one, and in good practice it universally prevails, to anticipate this period by the use of an active (not drastic) aperient. This rush of the system, if I may so call it, seldom lasts many hours, and having assured one-self of the non-existence of a morbid exciting cause in the bowels, it is well not to be too officious, but to wait patiently the result of the natural operations, which seldom fail to accomplish what they so vigorously attempt. But if idle fears for the texture of the brain, or fanciful alarms for the patient's mind, lead to a rash interruption of these important operations of nature, by the use of the lancet, her designs may never afterwards be accomplished, but the patient may either lose her milk, sink rapidly, get long-continuing irritable head, amentia, bad breasts with ill-concocted abscesses, or any of the irregular annoyances of the puerperal state. How far the operations of nature are to be allowed their sway, must be determined by the

judgment of the practitioner. I have, however, seen a patient blind, unconscious of the identity of persons about her, with a rapid bounding pulse, and much heated, without thinking myself justified in interrupting the state by even the application of leeches; and the result of a few hours has sanctioned and repaid the prudence of waiting, by a complete establishment of natural order in the patient: this patient, however, was constitutionally adynamic. There may be repeated disturbances of the system for several days until the functions of the breasts become well established, and then the patient is probably left with a state of head partaking both of the adynamic and the irritable kind, in which slight causes will produce the sense of sinking and actual fainting, and in which also slight causes produce temporary irritation or excitement of head: and if there exist any great domestic calamity or there be an inherent tendency to insanity, it now probably manifests itself in what is called puerperal mania, a state rather marked by debility of mind, deficient firmness of character, peevishness, undue fears, and despondency, than by any raving passion calling for the name of mania or madness. Gentle treatment, good mild diet, soothing of the

mind, cautious lactation, pure air, and time, seldom fail, with a renovation of the general tone, to restore the intellect to its pristine vigour, and the patient to her usual health and (if well managed) happiness. These persons should not be termed mad, insane, or maniacal ; and on recovery their case should be explained, otherwise it may, and I believe often does, secretly embitter, especially with the better and more reflective, their future life. These cases do not warrant an anticipation of insanity in the posterity ; nor are they any thing more than low states of animation and irritability, to which the maternal office subjects women.

Throughout the whole period of nursing, women require frequent and unusual quantities of mild food, and can seldom suffer any temporary privation without the sensation of sinking and faintness, or else an uneasiness and beating in the head. In persons of a previously defective appetite, and consequent weak and leuco-phlegmatic appearance, there is often great difficulty in persuading them to take sufficient nutriment, but experience after a time teaches the imperative necessity and the dependance of comfortable feelings of the head upon this cause, and hence these persons

not unfrequently experience after child-bearing and nursing a great improvement of person and general health; from merely continuing the acquired habit of better diet, they become pump, strong, more energetic and animated. It is a frequent custom, especially among poorer people, under the influence of the improper motive of preventing pregnancy, to continue suckling long after the natural period. This is seldom done with impunity, for both mother and child suffer materially: the child gets ill nourished and ricketty, and the mother wears down into a haggard ill-conditioned premature old age, and not unfrequently pays the forfeit of her life in a slow remittent fever, or in a low typhoid state, or in consumption of the lungs. In the exhausted state produced by over lactation, where a poor serous lymph is unnaturally solicited to the impoverishment of the blood and disturbance of all other natural functions, the woman, although emaciated, weak, cold, miserable, and deaf, generally fancies that her case requires bleeding, and too often gets bled for what she terms a swimming in her head. I have seen a woman so weak from this cause as to be scarcely able to drag one leg after the other, cold, the pupils dilated to the fullest extent and yet the sight

imperfect, hearing very obtuse, the head in a state of fatuity, and the general frame flaccid and withered ; and yet this person has come for the express purpose of being bled. I have no doubt that if bleeding had been done, fainting would have occurred from the operation and she would never have revived. By weaning the child and nourishing diet, this woman's head was rectified in three days, and in a week or two her strength restored so far as to enable her to follow her household occupations.

After weaning a child the system soon fills up, and the mother, if she take not exercise, soon becomes plethoric; and, if the head should suffer from this cause, it is generally marked by sleepiness, an indisposition to move, sensation of fulness rather than pain in the head, and giddiness. Aperients, exercise, and reduced diet, are the natural remedies for this state; but if the presence of some alarming symptom, as staggering, has called for the practitioner, the safer and more prudent course is to bleed directly, and then pursue the other measures.

Cases of disordered Head from defective vigour.

THERE is a disorder of the head of very common occurrence, and yet not coming under any specific term in general use. This disorder is not only a source of great distress and constant anxiety to the patient, but it often baffles the skill of the practitioner, being frequently not only not relieved by the general measures adopted in these disorders, but aggravated by them. In this disorder, the patient complains constantly of his head, but not in very definite terms: nor is the complaint confined to one part, but, although one part is more particularly referred to, the head, he tells you, is all wrong. He is afraid of falling to the ground, and very apt to be giddy after slight sudden exertion. His fear is the anticipation of a fit. On investigation, he is found to have been out of health and spirit some time, to have wasted in flesh, and to have had an insuperable languor and deficiency in muscular power: on further inquiry, he eats sufficient but not with relish, digestion is apparently proper, the abdominal secretions pretty right, sleep tolerably good, and the action of the vascular system merely a little languid, not irregular; and there is

some unusual degree of chilliness. His manner is marked by want of energy, his mind by indecision, and his body by general want of tone and action. The disorder often lasts many months, and then appears to get well without any evident adequate cause. But too often there is reason to believe its course is injudiciously changed, and fatal diseases superinduced: for, from whatever cause it may arise, it is evidently a disorder connected with deficient organic vigour, and therefore not calling for depletory systems; yet the length of its duration, the very slow gradual amendment when it makes a favourable progress, and the anxiety of the patient, generally leads to a wandering from one practitioner to another; and, as a very common mode of routine practice is to try that which has not already been tried, so, sooner or later, bleeding, &c. obtains its turn, and if largely and rashly persisted in, seldom fails to ensure those cerebral determinations and concurrent organic disease which they are meant to avoid. I have seen this form of disorder in many different ranks of life, and every individual has ascribed it to a different cause; one to study and confinement, another to the situation of his habitation, a third to over exertion, another to a

great disappointment; and a very sensible man once told me, that heads, like other things, were of different qualities, and the quality of his own was not naturally good. I could never trace, however, any causes adequate to the prolonged effects constituting this disorder; but I have of late years regarded a temporary defect of organic vigour, as the original fault giving rise to these effects, and consequently the thing to be remedied. And, consistently with such views, a use of the shower-bath, with gentle exercise, pure air, good (not high) diet, some slight tonic combined with rhubarb, and regular hours, and occasionally a mercurial alterative, in fact, a plan of judicious or cautious training has been the system I have seen best adapted to these cases, and by which, if steadily persevered in, a cure may be almost always ensured. A rapid glance at a few of these cases will illustrate the anomalous disorder to which I allude. I have chosen, from among many others, those which have proved most obstinate, and which, although they reflect least credit upon medicine, yet support the reasonableness of the present views.

A labouring man, about 38 years of age, had

been out of health and spirits some time, and had fallen away in flesh; he suffered much from languor, and was quite inadequate to muscular exertion; in the back part of his head he complained of pain, or rather of some constant unpleasant sensation, and his whole head, he said, was confused: he was much afraid of a fit, and carried his head with great steadiness, avoiding motion of the head as much as possible. There was no abdominal derangement adequate to these effects, nor any assignable cause to which it could rationally be imputed. Alteratives and aperients were used, and also cautious general and local cupping and bleeding; blisters were tried, and ointment of antim. tart., but without any good effect. A seton was introduced in the nape of the neck, without any relief of the head, but with this benefit, that the patient had confidence in it as a security against a fit. He now applied to an hospital, and was seen by a physician, who promised him speedy relief: he was freely bled, again blistered, leeches, and physicked, but with very ill effect. His plan was now ordered to be simple, he was to be cautious in his diet, to keep much in the air, and he took some rhubarb mixture frequently. Thus he went on for

many months without relief. At length he recovered perfectly, lost all his uneasy sensations and confusion of the head, regained his muscular tone and strength, and also his relish for food, and lost all fear of sudden seizure in the brain : and this without any further remedial measures.

A gentleman of fortune who had been much subject to scrophula in his youth, and who had since suffered much from disease, consulted me for what was a great source of distress and anxiety to him. He had a constant uncomfortable sensation at the back of his head, and general confusion in the whole brain : he was much dispirited, and had fallen away, experienced a constant lassitude, and was incapable of taking common exercise from muscular debility ; his appetite was not good, but he ate sufficient, and there was no traceable abdominal derangement, or deficiency of secretion ; he apprehended a fit, and although he had experienced recovery from many former complaints, he concluded this to be the last. He had suffered slight paralysis of the face some time before. Possessing a general knowledge of medicine, and being a fair reasoner on medical points, he had sent for me rather to consult upon his complaint than with the in-

tention of giving up to any thing that might be proposed, if contrary to his own judgment. I declined giving an opinion, until I had seen him two or three times, and it was then formed to this effect—that either there was some slow morbid deposition in the cavity of the cranium, which would not warrant bleeding or any harsh practice, or that the whole arose from defect in organic vigour, and that the indications were to cautiously try whether we could not restore the tone of the system with advantage. Some light preparation of bark and acid was tried for this purpose, and with temporary (but only temporary) benefit. Cupping was tried at his own urgent desire, but with this ill effect, that it caused, at least was followed by, bad nights with cerebral disturbance. The ointment of ant. tart. was after some time used, but without relief. A medical friend residing at a distance, and who had formerly attended him, taking the paralysis of the face as a strong indication, wrote a sensible letter strongly urging a dependence upon the use of a seton. This measure was adopted, but only with this good—that the patient felt a security in it; it did not in any way mitigate his feelings in the head. For many months he went on in this state, occa-

sionally taking the opinion of different persons, in which nothing essentially different was suggested. He now went into the north, and in despair of his head becoming better followed his inclinations in all things, and took to a favourite amusement of shooting; in this pursuit, he afterwards informed me, he was continually wet up to his knees, sweating, and then cooling, but disregardless of all consequences: now his appetite returned, he got into flesh and muscular strength, lost all the confusion and annoyances in his head, regained his spirits, and became as well as ever he had remembered being in his life.

A gentleman, 48 years of age, who had enjoyed an uninterrupted state of health until a year or two ago, became then confused in his head with an uneasy sensation, not amounting to pain, throughout the whole skull. He had with it great depression of spirits, and muscular debility; his appetite was not good, nor yet altogether defective; the tongue was slightly furred, but not more than he thought was usual to him. His head seemed to fail him in sight and hearing, and in his power of volition over his muscular system, and he was held in continual fear of a fit. After sudden

exertion, especially on stopping his horse, he has seemed for a moment to lose all power, and has thought he must fall. He had been ill six or eight months when I saw him, and had taken blue pill, mag. sulph. and senna, frequently. His state was now marked by unsteadiness of the senses of seeing and hearing, imperfection in recollection at times, great feeling of muscular debility, loose skin and flaccid muscle, the appetite was not keen but he took sufficient food, and there was no apparent abdominal defection, sleep good but no lethargy. Regularity in all habits was enforced, a slight tonic and the use of a shower-bath advised, and the almost certainty of a cure promised; at the same time a precaution against bleeding was given: the patient was also desired to observe occasionally his weight. In a few weeks he had gained flesh, felt less cerebral confusion, and had recruited in some measure his energies. For three months he went on thus, but at length the very slow advance he was making induced him to consult a high authority in London, who immediately ordered him to be cupped, and which was consequently done. This was followed by an increase of cerebral confusion, and greatly increased his fears. However, upon a re-

assurance of the adequacy of the original plan, and by a more determined dependence upon it for some months, he became perfectly restored to a steady and strong head, muscular strength, good tone of flesh and skin, the former power of recollection, and the usual tone of mental feeling together with all that buoyancy which constitutes health.

A lady, about 40, from no assignable cause, and who had never been subject to head-ache or any other disorder, got into ill health with a constant uneasiness and confusion in her head, which she seldom described twice in the same terms ; she was much dispirited, had fallen away, and felt very deficient in muscular power ; her appetite was defective, but she took sufficient food, and there was no sign of error in digestion, nor any abdominal irregularity ; nor was there any defect in the uterine functions. Light tonic medicines, the shower-bath, and gentle exercise, were recommended, and with some slight relief. Her head, however, continued in a not much amended state for many months, although, by the directions of other persons, many different remedies were tried, and among these, leeching and blistering. At length, however, after long despair, she,


from no assignable cause, recovered her steadiness of head, her appetite, her flesh, and her natural spirits.

I could very much add to these few cases, but my object is only to specify a class of disordered head deserving well to be understood from the mischief which may be avoided by not giving way to the injudicious fears of the patient. These cases are always marked by anxiety, loss of flesh, muscular debility, and defective (or rather not keen) appetite; and they seem always to warrant the opinion of deficient organic vigour, which circumstance has induced me to treat of them in this chapter. The depletory system, so generally adopted in disordered head, is here not only useless, but, if rashly adopted, fraught with danger, inasmuch as it will, if persisted in, insure cerebral excitement and determination, as all excessive bleeding is certain to do.

CHAPTER VII.

DISORDER OF THE HEAD SUPERVENING UPON
THE TREATMENT OF OTHER DISEASES.

THE science of medicine is attractive, the study of it easy, and if diseases kept as regular a course as is laid down for them in books, the practice would be as easy as the study. Experience, however, soon teaches the student that diseases, like fairly-described horses, often turn out tricky jades, and sometimes stop short in their regular course, and, as it were, set a kicking to their destruction, and to the confusion of those who endeavour to control them. Most of these irregularities are connected with the head, and afford matter for some remarks important and useful to all practical persons. It not unfrequently happens that a man having undergone for some time unusual mental and bodily fatigue, alters in his appearance and looks ill, jaded, and emaciated. He is, perhaps, advised by his friends to lay by and recruit, and he forms a resolution to do so; but, before his convenience, inclina-



tions, or interests, permit him to commence this, he is from some slight cause seized with inflammation of the chest (generally) or abdomen. For this the usual treatment, including bleeding, is adopted, and perhaps, from its immediate good effects, repeated; and now for a few hours follows a treacherous calm, which is made the basis of a favourable prognosis to the patient and friends. To the alarm of his friends, the confusion of the practitioner, and the great consternation of the patient, however, he becomes in a few hours strangely affected in his head, having probably with a sense of confusion dependant upon cerebral excitement, some visual or audible illusion: this leads to great perturbation of mind and dismay, and the patient is exceedingly anxious for relief of his head which he feels is wrong. The friends, and too often all parties, imagine it to arise from a shifting of the disease, and consequently further depletion is pursued with local bleeding for relief of the cerebral disorder. This is a fatal opinion, and, if persisted in, insures the destruction of the patient; for, although temporary calms follow the bleeding, re-doubled violence of excitement soon succeeds, and complete exhaustion is at no distant period accomplished. The cerebral

disturbance here is a consequence of the bleedings upon a previously exhausted body, and accords with the fact determined upon experiment, that excessive bleeding invariably determines the remaining blood to the head; and this effect constitutes a preservative law in the animal, for, if it did not exist, the animal must die, its life depending upon a fixed degree of cerebral excitement. This cerebral excitement after blood-taking in the emaciated or exhausted, should be a positive interdict to further depletion, and might be received as a friendly hint that we are taking unwarrantable liberties with an organization which we do not perfectly understand. And if we attend to this admonition, and steadily endeavour to reform our error by the frequent giving of mild food, and by soothing the alarms of the patient and the excitement of the head, a happy restoration will generally be the reward. The two following cases, chosen out of several others in my own practice, will illustrate this.


CASE 1. The patient saved.—A gentleman of fortune had lately purchased an estate a few miles from his residence, to which he was in the habit of daily going, and in which new undertaking he brought upon himself a great



deal of mental and bodily fatigue. From getting wet, or over-heated, or some slight cause (for it was not very manifest to what his disease was to be attributed) he got well-marked inflammation of the chest. For this I bled him with relief, and the usual medicines were administered ; but in two days his symptoms of pneumonia were on the increase, and I therefore repeated the bleeding, and in the evening he was considerably better, and everything promised a favourable issue. Early on the following morning, however, I was called to him with the notice that he was much worse, and I found him greatly distressed in mind, and in much perturbation ; he informed me that during the night his head had become every confused, and that some persons had been in the room all night ; his pulse was much quickened, and he was very desirous to have something done for the relief of his head. I explained to him the cause of this disturbance, and assured him that it was within control, and would soon be remedied. He was ordered to take mild food (gruel, orgeat, broth, blanc-mange, &c.) frequently, and his medicines, which heretofore had contained ant. tart., I changed to camph. & hyosciam : three or four days proved time enough to perfect a complete

restoration both from the cerebral disturbance and the original pectoral inflammation.

CASE 2. The Patient destroyed.—I was called to a man whom I found tossing to and fro in bed, looking half mad, and exceeding anxious for relief of his head; his pulse was very quick, and this was his history. He had been for two or three weeks running all over the country with some other fellows (their business in this wandering about seemed very obscure), and on his return home he was much exhausted, and complained of pain in his chest, which soon became very great. He understood doctoring horses and cattle, and therefore sent for a poor woman who was in the habit of bleeding, and got himself largely bled; this had been repeated four times when I saw him, and he had so closely followed an antiphlogistic plan, that, except some salts, he had taken nothing but water. His chest had been much relieved, and the latter bleedings were more for his head than lungs. He was desirous I should bleed him again, but this was over-ruled, and a positive interdict given to all further reduction. He was ordered mild food frequently, to keep quiet, and some medicines of camph. & hyosciam. The next day



he was better.—Plan continued. The second day so much better as to induce me to give a much more favourable prognosis than I had before made; his head was less confused, his manner less hurried, his pulse slower and fuller, and he had slept two or three times, a few minutes at a time.—Plan continued. Third day I was informed he was worse, and on seeing him concurred in the opinion: there was great excitement of the head, rash and quick manner, pulse very rapid, no sleep or even disposition to it. On going aside to speak to his wife, I observed a large basin-full of blood, and on inquiry was informed that at night, after I had seen him, he had insisted upon the further assistance of his female bleeder. This explained the matter. He was not alive the next day.

There is another disorder of the head, supervening upon the treatment of other diseases, of great importance, from the practical interests which it involves, and curious from its deceptive influence upon medical reasoning and the consecutive irrational treatment adopted. It continually happens, that a person being out of health, with some symptoms of the class of diseases termed phlegmasia, undergoes a me-

dical treatment so severe as to produce disorder of the head, participating both of the adynamic and irritable tendency ; and marked by vertigo, dimness of sight, noise in the ears, great beating in the head, flushing of the face, palpitation of the heart, and unnatural pulsating of the whole arterial system, great watchfulness, and general morbid susceptibility both of body and mind. These cases come to be regarded and designated as instances of *blood in the head*, or *determination of blood to the head*, and the treatment usually adopted is low diet, general or local bleeding, great quiet, and frequently antimonials and aperients are prescribed. The bleedings are generally followed by some temporary relief, and unfortunately acquire the confidence of the patient ; while its destructive effects, in further increasing the adynamic and irritable tendency and in undermining the general strength of the constitution, is perhaps never dreamt of until some fatal denotement lifts the veil and exposes the truth.

These cases are of great frequency and occur generally in delicate females, yet very often in delicate young men. The diagnosis is rather to be formed from the general history

of the case, than by any concurrence of symptoms admitting of a clear and concise description; and a case or two will perhaps be best illustrative both of the nature of the disease, and also of the principles of cure.

CASE. A young lady, aged 20, of small person, and little muscular power, a very scanty eater, and a water-drinker, had been subject to distracting head-aches for a long period, and occasionally to sudden fallings or fits which could not properly be designated apoplexy, epilepsy, hysteria, or syncope, but which partook in some degree of the characters of all. These attacks had been regarded as dependent upon a determination of blood to the head, and had been treated as often as they occurred by bleeding, and always with temporary relief; but the permanent evils resulting from this treatment (as proved by the result of an opposite plan) were, more frequent head-aches, and increasing frequency of the attacks, palpitations of the heart, and great muscular debility. The attacks had existed several months, and it was on a recurrence of one of the fits that I first saw the patient, when I was urged to repeat the bleeding, but objected. She took some medicine composed

of hyosciamus and camphor; and, although the pain, beatings and heat of head, continued as long, or rather longer, than when bleeding had been used, yet the next day she was perfectly free from any uncomfortable feeling; although, in her former attacks, she had generally suffered several days after, from an unsteady head and debility. The inadequacy of bleeding to the cure of her disorder, was now explained, and her mind fortified against her prevailing fears of recurrence; she was ordered a tonic medicine and better diet; immediately the attacks became less frequent and severe, and soon ceased. Some time after, mental anxiety occasioned considerable distress of head, for which, the sulph. of quinine was prescribed, and which proved a specific at all times in her case, and came to be as much depended upon by her as ever was opium by a patient who had experienced its relief.

I had intended to have instanced several similar cases occurring in my own practice, but the two following cases from Dr. Abercrombie's book are so exactly in point, and the *causes* of the determination of blood to the head so palpable, the reasonableness of the

measures of cure so unequivocal, the result so decisive, and the whole series of events so completely in accordance with the principles of this paper, that I cannot forbear to avail myself of them to the exclusion of my own cases.

A gentleman, aged about forty, had been for some time losing considerable quantities of blood by arterial hæmorrhage from the rectum. Considering it as merely hæmorrhoidal, he had paid little attention to it, until his friends became alarmed by his altered appearance. From being strong and rather plethoric, he had become weak, exhausted, pale, and haggard. He had anasarca of his legs, his pulse was frequent and feeble, and much excited by the least exertion. Along with these symptoms, he was liable to strong and irregular action of the heart, and complained of giddiness, tinnitus aurium, violent throbbing in the head, and frequently of throbbing head-ach. On examining his rectum, a fungous tumor was found within the sphincter, on the apex of which a small artery was bleeding *per saltum*. This was tied, and there was no return of the hæmorrhage; and under the use of nourishing diet, and a liberal allowance of wine, all his

other complaints disappeared. He made up so rapidly in flesh and blood, that not long after, apprehensions were entertained that he was becoming too plethoric, and it became necessary to reduce his regimen, but under these circumstances he had no return of the symptoms in his head.

A lady, aged twenty-five, had been frequently bled on account of symptoms in the head which had supervened upon an injury. Considerable relief had followed each bleeding; but the symptoms had soon returned so as to lead to a repetition of the bleeding at short intervals, and this had been going on for several months. When I saw her, she was stretched upon a couch, her face of the most death-like paleness, or rather of the paleness of a stucco figure, her pulse very rapid and as small as a thread, her general weakness extreme. The mass of blood appeared to be reduced to the lowest point that was compatible with life, but she still complained of frequent head-ach, violent throbbing in the head, confusion and giddiness. It was evident that evacuations could be carried no farther; and, in consultation with a very intelligent medical man who had the charge of her, it was



agreed as *a last experiment* to make trial of the opposite system, nourishing diet and tonics. In a fortnight she was restored to very tolerable health.

CHAPTER VIII.

RECAPITULATION AND CONCLUSION.

TO recapitulate then and conclude upon the foregoing matter. It should appear that the head is the ultimate aim or perfection of design in the animal, and that the structure and functions of other parts of the body are principally servient or subservient to that sensibility of which four of the organs are entirely, and a fifth partly, situated in the head. It has been shewn, that any degree short of that excitability which constitutes a proper relation between the intellectual powers of perceiving in the animal and the natural physical laws of the material world is absolutely useless, and hence the necessity is demonstrated of those sensible organs being kept in a constant determinate state of excitement. And as many physical causes, particularly bleeding, exhaustion, and starving, are known to produce suspension or interruption of that determinate degree of sensibility so essential to life, a preservative law in the animal has been inferred and demon-

strated to exist, by which a salutary determination of a larger portion of the remaining blood is appropriated to the head, and this sometimes at the expense of other parts, as the feet and hands. The knowledge of this law has unfolded to us many curious and useful circumstances connected with cerebral disorder, and served to explain many phenomena connected with the head, which have heretofore, if I mistake not, been great stumbling-blocks in practice. In the understanding of this law, has been demonstrated the important fact that undue depletion determines to the head: whereas, in the scientific world, it has universally been thought, taught, and practised upon, that undue determination of blood to the brain was dependent upon an excess of that fluid: and consequently, the practice adopted for the relief of these cases has, in many instances, been just that which is calculated to ensure its continuance, and it is to be feared, has often further increased that determination to the production of effusion, an effect which may demonstrably be produced by excess of bleeding, and which demonstration may be found both in the experiments of Dr. Seeds and Dr. Kellie. The existence of this salutary law being admitted, and it cannot be denied, its operation and

bearing becomes a point of primary consideration in the treatment of all cephalic disorders : while an understanding of it has unveiled the cause and origin of many of those sudden and dangerous cerebral disturbances which arise during the treatment of other diseases. Nor could its bearings be confined solely to those disorders which are strictly called cephalic, but with a practical view its existence and operation has been slightly hinted at, in connexion with the existence of nearly all other diseases.

Although the experiments of Dr. Seeds have recorded some of the effects, and many consequences of this law have been continually offered to the eyes of practitioners, yet have not these effects or consequences been heretofore recognised as constituting a law of organization, and consequently this law could not have been until now illustrated in its bearings. Yet the effects or consequences of this law have demanded from the practitioner a treatment for speedy relief, and bleeding being the remedy found most useful in other local vascular excitements has been the measure usually resorted to here ; and the temporary relief which follows its usage has seemed to



sanction it as the appropriate remedy : while its future destructive tendency has been, from our ignorance of this salutary law of cerebral determination, a veil between our understandings and the truth. So that, when men have further enquired after death by dissection, as to those cerebral determinations, they have found the vessels of the head, notwithstanding the great and repeated bleedings, gorged with blood, and the structure of the brain suffused with water ; and thus the understanding has fallen into the error of viewing these manifestations in the brain, not as effects of a salutary law and ill-judged measures, but as causes demanding a still further enforcement of bleeding. But, as the blood-taking is often carried to the fullest extent of its warrantable bounds, without curing, or in any manner reducing the cerebral disorder, the practitioner soon recognises the inefficiency of bleeding as a specific to cephalic disturbance : he sees, however, in dissections a multiplicity of morbid appearances in the brain, considers it a very complicated and delicate organ, and therefore imagines bleeding to be the safest side of conduct : and hence its usage is almost universal in disorders of this part, but without any system existing which can warrant the assertion that these dis-

eases are treated upon Science or Principle. There has been in fact such an universal vagueness in the treatment and precepts for these disorders, that they lay cerebral practice open to any designation of mere empiricism. To avoid this, I have endeavoured to shew that the fears which influence men in this kind of practice are groundless, that there is no inadequacy of strength in the brain, nor any undue vascularity of that organ, and that the physical structure, situation, and circumstances of the brain, do not expose it to those engorgements or obstructions of blood which have been imagined. And that, when from peculiar and unnatural circumstances an inordinate action of the blood-vessels in the head is induced, there is no general tendency to rupture, and that where ruptured vessel does occur, it is attributable generally more to weakness of vessel than any other cause.

The preservative law of cerebral determination being demonstrated, and the undue fears for cerebral disorganization removed, I have proceeded to enforce their rational bearings in actual practice, and here I have faithfully refrained from advancing any thing which is not sanctioned and approved by success either

of cure or the alleviation of actual disorder; and, in order to preserve a clear and useful method of enforcing the bearings of the previous reasoning, I have done what every one has been compelled to do, gone into arbitrary divisions of diseases; not that in practice they always occur in those simple divisions, but that simple forms must be comprehended before an attempt can be made to understand the more complicated forms which sometimes present.

Beginning with a common and fatal form of disease, occurring suddenly from rupture or distension of blood-vessels in the brain, I have declined the usual appellative given to this disease, because of its extensive applicability, and have preferred an old but clear-meaning phrase of 'blood-stroke.' By the usage of which, the cause of the disease is constantly kept in view, and other sudden disorders excluded from our contemplation. As this phrase so clearly and concisely designates the cause, so I have thought it expedient to be equally concise in the essential symptoms or effects by which the disease is known, and have consequently omitted to enumerate that multiplicity of adventitious symptoms, some of which so

frequently accompany it. The dwelling upon adventitious symptoms in the study of disease savours of that useless trifling precision which led a physician, in describing the symptoms of a dying man, to enumerate the circumstance of a fly being on his nose. In the treatment of blood-stroke, the measures recommended are those usually adopted, but I have endeavoured to give fixed precepts for the regulation of those measures, rules which are much called for, and which have hitherto been universally avoided by writers upon this disease. I have recommended the use of the stomach-pump for administering medicines in the complete and permanent stroke, in the conviction that without it the patient has not his chance of relief from prescribed remedies. Its application in the insensible is very simple, easy, and satisfactory in all points of view, as I have experienced in some cases of attonati.

There is a long period after the blood-stroke full of anxiety, and in which every measure of the patient seems to have its accompanying cause for fear; if he be inert, then he induces a fulness of the vascular system and also a weakness of the vessels themselves; if he be

active, then he quickens the action of the vessels in the head ; if he sleeps much he favours lethargy, if little he produces an irritable state of head ; if he eats too much he makes too much blood, if too little he exhausts and consequently gets an irritable and quickened circulation. Bearing all these circumstances in mind, and also the nature of the disease to be anticipated, I have laid down those precepts which are dictated upon the previous reasoning, and I can bear experimental testimony to their practical soundness. In these precepts I have deprecated bleedings for slight causes, in the conviction that blood-taking in the debilitated and already exhausted always gives rise to erratic symptoms, which are very apt to render the case confused both to the patient and practitioner, and which are not otherwise void of danger. The only circumstance which in these cases induces me hastily to take blood, is a sudden or increasing state of lethargy. Other cerebral irregularities, such as giddiness, noise in the ears, confusion of sight, slight pain, &c., have not appeared adequate causes for its adoption ; and of late years, I have not been by those symptoms *merely* induced to bleed, and in no instance have I had reason to regret such omission, but, on the contrary, the result has

always been satisfactory to myself and congratulatory to the patient.

After the blood-stroke, I have considered the water-stroke a sudden and fatal disease occurring too often to be unknown to the practitioner, and yet, fortunately, not so frequent as to afford to the generality of men data sufficient to make it a subject of practical reasoning. I have, therefore, rather given the experience of Dr. Golis a German physician having vast opportunities from an office he holds at Vienna, and whose valuable book has been given in English by Dr. Gooch, whose excellent judgment bears testimony to the truth of the description of this disorder. Little can be said here of practical measures for relief, but some expressions of Dr. Golis concerning stimulating baths, spoken of in another part of his book, afford a gleam of hope that he had in some rare instances seen it cured; and, as even a chance of success from a rational measure might give an energy to practice, I have not omitted to recommend that measure, and also to hint at the possibility of recovery. I have then taken a view of simple idiopathic or true hydro-cephalus.

An abdominal disease of frequent occurrence, and terminating in effusion of water in the brain, and to which, for this last hundred years, practitioners have applied the terms hydrocephalus acutus, afterwards naturally forces itself into consideration. The cause, nature, and alliance of this disorder, I have then endeavoured to follow, and to shew that three consequences having different appellations, or in other words three diseases do originate in the same cause, and up to a certain point do pursue the same course, and are all consequently mere modifications of an original state of abdominal disorder; and but that it would further have complicated the subject I should have added a fourth disease, namely, worm-fever, which pursues the same course, and requires only the presence of worms to be intitled to another name. In the treatment of the latter stages of this disorder, when terminating in an affection of the head, there is much difference of opinion upon the question of bleeding; and in the precepts laid down by writers, and in the oral directions of lecturers, there is an *admirable* vagueness and indefinite sense upon the point, which leaves the student to do as he pleases. But as the routine practice of other men, the *on dits* of *talking* people, the

gentle insinuations of other practitioners, the query of whether *enough* has been done, and all the other *precious thistles* of the medical art have their goading influence—it rarely happens that the acts of blood have not their full representation, nor do they often fail to meet with their full measure of applause, and the more bloody the scene, the more rapturous the plaudits to the author. Hence it is, at least so I imagine, that although the more reflective are divided in opinion as to the propriety of bleeding in this advanced stage of acute hydrocephalus (so called), yet the practice of bleeding is almost universal, although the result is almost always fatal. Germany would appear to be no more free from these shackles of the medical art than England, for (page 130), Dr. Golis says, “if some blood must be taken to fulfil the wish of the consultation physician, *and to secure his own character in an unhappy termination of the disease, which would otherwise be ascribed to a neglect of this remedy*, let him take care to draw only a harmless quantity.” What is a *harmless* quantity? Some years ago, I used continually to see children die of the acute hydrocephalus in spite of bleeding, blistering, &c. &c. For several years, however, no child

has died in my practice from that disease, of which I have had the control, and as I am thoroughly convinced of the inefficiency, and indeed inadmissibility of bleeding in this disease coming through the previous abdominal disorder, and have consequently utterly discarded it, I am bold, and indeed bound to dissuade from that measure, in the treatment laid down for this particular disease. My object has been only to offer rational comments, but if authority be required to enforce this precept, then the following from Dr. Golis may serve—page 118. “Odier seldom saw bleedings do good, and even found them dangerous. Such was also the opinion of Portenschlag (the father). Desessart says, if in children with large heads, blood *must* be taken away, it is only in small quantities. *According to my experience, blood-lettings are fruitless in the water-stroke, pernicious in chronic hydrocephalus, and only in the acute hydrocephalus, at determinate moments, and under certain circumstances, efficacious and necessary.*”

The acute idiopathic inflammation of the brain, a disease in this country comparatively rare, is next considered, and afterwards the more slow or chronic forms of inflammatory

action in the head; these have, for the most part, some connexion with aberrations of the mind, but I have not thought it necessary to go into them any further than relates to the organic disease, and the physical treatment of approaching or temporary phrensy, leaving the moral, physical, and dietetic management of confirmed insanity, as a province requiring to circumvect it, too great a digression to be consistent with the intention of this paper. The next part is a consideration of irritated head; and if the alleviation, or rather prevention of pain, be important, this part, inasmuch as it embraces by far the greater part of painful cerebral disorders, ought to be particularly so. The treatment of them all consists in removing and avoiding the immediate cause, and, by improving the tone and condition of the patient, to render him less sensible to the excitement he is naturally or artificially exposed to. To aid the discernment in distinguishing the source of these painful affections, I have enumerated the causes and functions in which the disorder originates, thus rendering the practice, when the cause is ascertained, exceedingly simple, although very effective: these causes may be termed gastric, duodenic, intestinal, muscular, sensual, intellectual, and

sexual. There is another very painful affection of the head having a pectoral cause, but it can scarcely be embraced in the terms irritated head, as it is more dependant upon an obstruction of blood through the lungs, and is particularly pathognomic of inflammation of the mucous membrane of the lungs, so common to occupations subjecting persons to the inhalation of acrid dust, as glovers, needle-grinders, &c. The pain here being strictly sympathetic, I have omitted to dwell upon it as a cerebral disorder. I have lastly described a state to which I have considered the terms 'adynamic head' most appropriate: it is rather marked, as the term implies, by a deficiency of power, than by the existence of positive and urgent symptoms; and, although it may be thought by some to be unnecessary, as not forming an actual cerebral disease, yet it is so decidedly essential to an understanding of some complicated cases, that it could not be consistently omitted.

To bring these simple divisions of cerebral disorder to their practical bearings in complicated cases, I have chosen for their first application the puerperal head as one of the most difficult and variable, and consequently

the most illustrative. A few cases of anomalous disorder, but which are evidently connected with, and probably dependant upon defective organic function, and which had obstinately resisted the usual means of relief, and yet ultimately recovered from the inherent powers of the body, are then related. They are chosen out of many cases which have been relieved and cured by the rational measures adopted in them, and are advanced as examples dissuasive from irrational and kill-or-cure practice, and to enforce a proper reliance or preference to the chances of the inherent powers of organic recovery. Disorders of the head supervening upon the treatment of other disease, seemed to afford another opportunity of further illustrating the principles laid down, and here I have only given two or three cases lest the matter should prove tedious.

For the further and more complete understanding of cerebral disorder, there is required a perfect knowledge of the exact structure and formation of the skull, in order to meet those mechanical injuries, and to afford that mechanical aid which is so frequently demanded from accidents. An intimate knowledge and

familiarity with that peculiar state of constitution in females, called hysteria, is also essential to sound practice in disorders of the head, and should in them never be lost sight of. General febrile disturbance is also another common cause of sympathetic cerebral disorder depending for its *cure* upon an understanding of fever in general. Rarely, and comparatively but very rarely, an exostosis and morbid growths within the head are the causes of cerebral disorder; their almost want of symptoms in the earlier stages would preclude the timely application of appropriate specific remedies, if any such were known, while their obscurity and infrequency will probably always prevent any thing like a comparative estimate of the powers of medicine in these cases.

To conclude—I have in these pages endeavoured to make as clear and condensed a view as possible of disorders incident to the head, and at the same time to lay down principles for their treatment founded upon reason and experiment, and sanctioned by actual experience in practice. The simple forms of disorder being comprehended, the understanding readily perceives the more complicated

forms which so frequently occur; and the judgment, without embarrassment, soon discerns the modified course of treatment required by these modified disorders of the head.

General principles only are enforced, and much is necessarily left to the discretion and judgment of the practitioner; this, in every point of view, is advantageous, and indeed is the course I should have adopted, even if a more specific and detailed line of conduct could have been defined. But to have attempted any thing like a specific treatment, by the recommendation of particular medicines, doses of medicines, articles of diet, fixed degree of exercise, &c. &c., in these diseases so variable and so modified by age, sex, strength, habit, idiosyncracies, exterior circumstances, &c., would have been almost as fruitless a task as to point out to a mariner the bearing, sail, offings, &c. &c., he should take in navigating a ship; certain general principles are essential to his safety, but the application of those principles constitute an art acquired only by practice and experience, and which will always be influenced by many adventitious circumstances. Sufficient, how-





